BALANCE:

THE FUNDAMENTAL VERITY

By Orlando J. Smith

Offering a *Key* to the fundamental scientific Interpretations of the System of Nature, a *Definition* of Natural Religion, and a consequent *Agreement* between Science and Religion.

With an APPENDIX containing *Critical Reviews* by scientific and religious writers, and a *Reply* by the Author to his Critics.

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BALANCE

THE FUNDAMENTAL VERITY

I

The Power of the Sea curbs the Sea — Physical Excess turns upon Itself, defeats Itself — Excess is defeated also in Chance, into which Physical Force does not enter — Deficiency balances Excess — Nature's Law of Balance.

LONG ISLAND extends into the Atlantic Ocean for more than one hundred miles to the east of the mainland. The ocean, impelled by the prevailing southwest winds, beats with great force upon the island, and would overwhelm it but for a series of sand-banks which lie next to the sea and resist the force of its waves. Inside of these dunes

is an almost continuous line of villages, the inhabitants of which live in no fear of the sea, though they know that one of its storms would inundate their low-lying lands if they were unprotected by the dunes.

Against the dunes the ocean wages unceasing war, retiring a little for rest at low tide, renewing the conflict with the turn of the tide, and rising often, with the assistance of the wind, to a furious assault. Each day the ocean wastes more force in its attacks than was ever exerted upon a human battle-field, and each day it suffers defeat.

These barriers against the sea were not built by human hands nor planned by human thought, though no modern engineer could have designed a better protection for the land or built with less waste of material or with a closer calculation of the strain on the different parts of the line of defense. On the western shore of the island, where the force of the waves is

weaker, owing to the proximity of the mainland, the barriers of sand lie low; to the eastward they rise higher to meet the increasing power of the sea. They cut straight across large bodies of the sea from one point of land to another, that they may offer no weak angle to the enemy. The dunes are so constructed as to present upon their whole front that exact angle to the line of the prevailing winds that will make each assault of the sea a glancing blow.

It is the power of the sea which forms these barriers against its own depredations. The force of the waves lifts the sand from the bottom of the sea, depositing it upon the shore. Each wave carries a little sand; the stronger the wave the more sand does it carry; the severer the storm, the higher does it lift the sand upon the dunes, the more impregnably does the ocean fortify its shores against itself. Why the power of the ocean gives that exact trend

to the dunes which makes them strongest, is explained by Darwin's theory of natural selection: only that form of dune fitted to resist the sea could survive.

The explanation of the dunes is simple, the processes of their formation still continuing and being open to examination. But the meaning of the dunes is less simple. They testify to the fact that Nature curbs the excesses of the sea by a process quite reasonable, indeed unavoidable. The force of the sea is turned against the sea. This fact, and numerous other facts, suggest the theory that in some way all excess is curbed, or will finally defeat itself; that Nature has no pendulum which swings in one direction only.

In the case of the dunes we have an illustration of physical force restraining and defeating itself. An example of Nature's antagonism to excess, into which physical force does not enter, is found in the laws of chance — what we call chance

or luck being quite as much under the control of law as other things. In a drawing of odd and even numbers, the chance that the odd number — using the odd for illustration, the chances of the even number being the same — will emerge in the first drawing is one in two; the chance that the odd will be drawn a second time is one in four; that it will be drawn a third time is one in eight; a fourth time one in sixteen, and so on. There is one chance in 1,024 that the odd will be drawn consecutively ten times; one chance in 1,048,576 that it will be drawn twenty times; one chance in a thousand millions that it will be drawn thirty times; one chance in a million millions that it will be drawn forty times. It is as if Nature should say:

"Against the consecutive return of the odd number, I double the barriers with each drawing. It is not alone physical excess which produces opposition; it is excess in whatever form it appears which

turns upon itself, defeats itself. And my law is no more against excess than against deficiency. The barriers against the consecutive return of the odd number force the return of the delinquent even number. In the long run, the odd and even numbers drawn shall be equalized repeatedly.

"So far as you overdraw the odd, just so far you underdraw the even. If, in ten drawings, you have drawn the odd seven times, and the even three times, then the odd is in excess by two drawings, and the even is in deficiency by two drawings also. Strictly speaking, nothing is ever out of balance in my processes. That which is overdone in one direction is underdone equally in an opposite direction. Excess can exist only through a corresponding deficiency, and deficiency can exist only through a corresponding excess. A deficiency in crops is balanced by an excess in prices; an excess in crops is balanced by a deficiency in prices. Other balances,

corrective in their nature, rise up also. A deficiency in crops, with the corresponding high prices, stimulates efforts, such as better cultivation and increased planting, to overcome the deficiency, while an excess of crops sets forces at work to repress over-production.

"In my domain, all things are generative. Out of maturity comes infancy, out of darkness light, out of force new forms. Thought breeds, wrong breeds, good breeds. Excess and deficiency breed also, each begetting its own destroyer."

We live in a world in which, if science and philosophy do not err, there is ceaseless motion everywhere, and perfect rest nowhere. There is motion in the heart of the granite mountain, in the minutest portions of the human body; motion great and insignificant, perceptible and imperceptible, disastrous and beneficent. Is this motion — which is as persistent in human consciousness as in matter — under no re-

straint, no order, no law? or is it under the control of some power or principle which curbs excess, restrains deficiency, restores balance, grants compensation? Whether the return of equivalence and compensation is not fundamental in Nature, alike in physics and in the human soul — whether the rational foundation for man's hope for a future life, and for his belief in the rightness of the world-order, should not be sought for in the supremacy of equivalence and compensation — this is the subject of my inquiry, in which I shall deal briefly with the relations of balance to physical science, and pass promptly to the larger question, the relation of compensation to human affairs.

II

Equilibrium, in the Sense of Actual Rest, is Unknown — Nature is a State of Ceaseless Motion, regulated by Balance.

WHY do I use the word balance instead of equilibrium? Is not equilibrium more accurate than balance? We observe much of stability, poise and equivalence in and about us, which we call equilibrium. But we have not observed *perfect* equilibrium. The word *perfect* is often misused. Nor have the physicists, with their finest balances and instruments of precision, found perfect equilibrium. They have invented scales which, placed in a vacuum, isolated as far as possible from external disturbance, weigh with remarkable fineness. But they have invented no scales and discovered no conditions which enable them to weigh with *infinite* fineness. The in-

finite eludes us. If they should improve their balances so that they may weigh one of the motes which we see in a sunbeam, still they would not reach perfect equilibrium. They must weigh a millionth of the mote and a millionth of that millionth, and so on to infinity, the unreachable.

The problem of perfect equilibrium faces infinite perturbations on all sides. There is no perfect vacuum for the scales. Our government at Washington preserves our standard measures in an even temperature. The evenness of temperature can be maintained to one degree, perhaps to the hundredth of a degree or to the thousandth, but not to the millionth or to infinite fineness.

Moreover, the maintenance of a perfect equilibrium would be in conflict with the scientific assumption that motion is ceaseless. Perfect equilibrium maintained would be perfect rest, that which exists nowhere, according to the theory of the continuity

of motion and the persistence of force. Well it is with us and with the world that perfect rest does not exist! If the blood in my body should stand at perfect equilibrium for a moment, I would die. For motion is life; its cessation would be extinction.

Equilibrium may be compared with the present in time, which, strictly speaking, is that point in which the past and future meet — a point which is really imperceptible, as the reader will realize if he will pause and try to hold or catch it. It is gone before we can grasp it; it is swifter than the thought which would comprehend it.

As the present is a fact in time, though elusive, so we may assume that two weights, nearly equal, swinging in a balance, will pass and repass the point of equilibrium, even of perfect equilibrium, with each alternate movement of the arms of the balance. As the present is a point

which we gain only to lose it, so equilibrium is a point or line which motion crosses and recrosses without resting upon it.

When scientific men have occasion to speak of equilibrium with exactitude, they use the qualifying term "approximate," meaning thereby relative or practical equilibrium, nearness to perfect equilibrium, a good state of balance. And this is what we find — a good state of balance — in Nature, notwithstanding her ceaseless motion and transformations, some transformations being slow, requiring millions of years, some as swift as the transformation of the future into the past, some open to our sight, some imperceptible, the greatest being sometimes the least perceptible to our senses, as is the motion of the earth in its ceaseless journey around the sun at the rate of eighteen miles a second, one thousand and eighty miles a minute — as if one should fly from New York to Yonkers in

one second, to Albany in ten seconds, to Buffalo in thirty seconds, to Chicago in one minute, to San Francisco in three minutes — one thousand times faster than an express train, fifty times the speed of a rifle-bullet. We are disturbed often by our own little projects, inventions and affairs, but we are not fearful that the bulky earth will come to harm in its mad course, nor would we know that it moves at such speed, or that it moves at all, if the astronomers had not demonstrated the fact. Nor does Herschel's discovery that the solar system is moving at the rate of about twenty thousand miles an hour toward the constellation Lyra disturb us, nor do we worry over the apparently inevitable collision to follow this movement, for the astronomers assure us that that danger is remote, and that it will come, if it comes at all, long after this earth has ceased to be habitable. We are persuaded that the astronomers have discovered regularity and precision in the

movements of the heavenly bodies, that their forecasts of these movements are trustworthy, and that Nature, in the large, in her greater and grander manifestations, is ruled by order.

III

The Scientific Interpretations of Nature point to the Single Interpretation, that Balance rules the World — "To Every Action there is an Equal Reaction," is the Supreme Statement.

MODERN science accepts with practical unanimity eight interpretations of the system of Nature, which are recognized usually as fundamental:

1. *To every action there is an equal and opposite reaction.*

"If fire doth heate water, the water reacteth againe . . . upon the fire, and cooleth it," says Sir K. Digby (A. D. 1644). The wagon pulls against the horse with the same strain that the horse pulls against the wagon. The knapsack exacts from the soldier who carries it an expenditure of force equal to its weight. Let me strike a stone wall with a gloved fist, and it will give

back a gloved blow in response. The wall will be gloved, even as my fist is gloved, at the point of contact. Let me strike hard with bare knuckles, and I shall be convinced that Nature gives even to senseless things some powers of resistance, of defense, even of resentment. If I should be thrown upon the stone wall by accident, still the wall will return the blow with equal force. Nature's ways are exact — strain for strain, blow for blow — with no allowance for intention.

"To every action there is an equal and opposite reaction," is Newton's Third Law of Motion, which is accepted as the fundamental axiom of physics. In this law Newton has expressed also, I believe, the fundamental law of Nature — that action and reaction are ceaseless, equivalent and compensatory.

2. *That effects follow causes in unbroken succession.*

Strictly speaking, the axiom of causa-

tion is only another expression of the axiom "that reaction equals action." Effects are the consequences of causes, the reactions from causes, the equivalents of causes.

3. Gravitation — *that every two bodies or portions of matter in the universe attract each other with a force proportional directly to the quantity of matter they contain and inversely to the squares of their distances.*

Gravitation, if considered as a force of *attraction* only, is a force which balances its opposite, *repulsion.* The attraction of the sun balances the momentum which would otherwise project the earth on a straight line into space. This balance holds the earth steadily in its course around the sun. Opposite forces of attraction and repulsion, centripetence and centrifugence, exist in the world in its greatest and smallest parts, alike in constellations and in atoms. Science is compelled to recognize repulsion as being as universal as attrac-

tion. To account for these contrary forces has so far baffled investigation, Newton's great discovery accounting only in part. Science knows only this — that these forces exist; that they meet, offset, neutralize and regulate each other, sometimes mildly or imperceptibly, sometimes violently and with fearful convulsions, and that in their influences, contacts, struggles and wars they hold all things in balance.

4. Evolution — including its opposite, devolution or dissolution — *that the fit advance and the unfit decline, advancement depending upon adaptability, and decline upon inadaptability, to environment.*

There are seeds that will grow in a sandbank, others must have loam; some will grow only on mountain heights, others on low levels; some in low temperatures, others in high; some organisms can live only in the water, others die in the water; some are self protected against the ele-

ments, others must be housed and clothed — and so on through numberless variations in requirements. Evolution is the balancing of organisms with their surrounding conditions, influences and forces. Those that are fit — that is, in harmony with their environment — will survive; those that are unfit will fail. As Herbert Spencer says:

"Evolution under all its aspects, general and special, is an advance towards equilibrium. We have seen that the theoretical limit towards which the integration and differentiation of every aggregate advances, is *a state of balance between all the forces to which its parts are subject, and the forces which its parts oppose to them.*" — Biology, ii. 537.

5. *That matter is indestructible.*

6. *That force is persistent and indestructible.*

Mr. Spencer has said (First Principles, p. 182) that "the verification of the truth that matter is indestructible" rests only upon "a tacit assumption of it." "A tacit

assumption," with no rational basis for the assumption, would be no verification; it would be a guess. The truth that matter and force are indestructible rests upon a better ground than an assumption; it is the inevitable corollary of the truth, "To *every* action there is an equal and opposite reaction." If there could be a single case in which matter and force are annihilated, then Newton's axiom would be untrue, for, in that case, reaction would fail to follow action. The turning of something into nothing, by the destruction of matter or force, would break the succession of cause and effect, of action and reaction; and consequently the theories of the indestructibility of matter and of force have their roots in Newton's axiom, in the great law of consequences, of equivalence, of compensation, of balance.

7. *That motion is ceaseless*, and consequently *that transformation is continuous.*

This, like the theories of the indestructibility of matter and of force, rests upon Newton's axiom. If motion should cease, then there could be no reaction for "every action." The modern theories of the persistence of matter and force, and of the ceaselessness of motion, are extensions, interpretations and necessary consequences of the fundamental truth that "every action" is followed by a reaction.

8. *The laws and ways of Nature are uniform and harmonious.*

Uniform means of one form, agreement, consistency. Harmony means concord, the just adaptation of parts to each other, agreement also, unison. We observe this uniformity, harmony and agreement to a marked degree in the fundamental explanations of Nature which we are now considering. They teach us that there is neither halt nor break in Nature's processes; that motion is ceaseless, transformation con-

tinuous, force persistent, matter indestructible; that in these ceaseless transformations repulsion balances attraction, effects balance causes — in short, that reaction equals action, that balance attends and controls transformation.

We cannot assume uniformity and harmony without also assuming a ground of uniformity and harmony. What is Nature's one form, or rule, or way, or law, or principle, upon which her uniformities and harmonies rest? Of the fundamental explanations of science, one — Newton's law of ceaseless equivalence and compensation, "To *every* action there is an *equal* and opposite reaction" — is the imperious and supreme statement, the others being subsidiary or complementary to it, or explanatory of it.

These fundamental conceptions of science point distinctly and with emphasis to this higher and single generalization — *that Balance rules the world.* Balance is

the key that unlocks them, the word that explains them, the principle that unifies them.

IV

No Force works aimlessly or wanders away into Extinction — Balance is Supreme in the Small, as well as in the Great, Processes of Nature — Every Physical Transformation includes Exact Equivalence and Compensation.

"WITHOUT the axiom that action and reaction are equal and opposite, astronomy could not make its exact predictions," says Spencer (First Principles, p. 193). As astronomy discerns the operation of the laws of balance in the remotest regions accessible to human vision, and in the most tremendous phenomena, so chemistry discovers the same accurate adjustments among the smallest particles of matter of which we have any knowledge.

Lavoisier is called the founder of modern chemistry. That which distinguishes his work from the work of his predeces-

sors is the more accurate measurement of the materials and forces which are involved in chemical changes, and a more orderly view of these phenomena as perfectly balanced interactions. His work destroyed the theory of "phlogiston," which was inconsistent with natural balance because it introduced a mystic agent — "phlogiston, the spirit of fire" — having unnatural properties contradictory of the law of action and reaction.

The problem of oxidation puzzled chemists in Lavoisier's day. The rapid action of fire and the slow rusting of a metal were seen to be closely akin, but the cause was elusive. It was necessary to learn that the essential of both processes is oxygen, coming from the air or some other source; and that there is no actual loss or gain in the process of oxidation. This truth led to the broader knowledge that, in every chemical transformation, whatever disappears in one form, reappears in another;

that every manifestation of force is due to a disturbance of balance among the minute, invisible particles which we call atoms; that no force works aimlessly or wanders away into extinction.

The most recent discoveries in thermo-chemistry, in electro-chemistry, in the phenomena of solution, and in the realm of molecular structure, depend upon the same principle: that any apparent super-abundance or deficiency indicates error, and that the truth will always reveal a perfect correspondence, equivalence, and rectitude of law.

The history of chemical experimentation is full of the most perfect illustrations of the principle of equivalence, which finds its simplest expression in the universal practice of chemists in writing down every chemical reaction as an equation: So much of this plus so much of that *equals* the result.

We shall search in vain for any demon-

strated truth concerning the system of Nature, for any law, rule or axiom of physics, which does not rest fundamentally upon the equivalence of action and reaction, of cause and effect. "The straight line joining the sun and planet must pass over equal areas in equal times," is Kepler's law. "At any point in a fluid at rest the pressure is equal in all directions," is Pascal's principle. "A body immersed in a fluid is buoyed up by a force equal to the weight of the fluid displaced," is the principle of Archimedes. "The angles of incidence and reflection are in the same plane, and are equal," is the law of reflection. "The reciprocal of the principal focal length is equal to the sum of the reciprocals of any two conjugate focal lengths," is the law of converging lenses. "The current is equal to the electro-motive force divided by the resistance," is Ohm's law. "The disappearance of a definite amount of mechanical energy is accompanied by the production

of an equivalent amount of heat," is Joule's principle. Observe how perfectly these and the other principles and laws of physics agree with Newton's law of motion : "To *every* action there is an *equal* and opposite reaction."

The universality of equivalence is broadly expressed in the law of the conservation of energy: "When one form of energy disappears, *its exact equivalent in another form always takes its place.*" This law, accepted by modern science, leaves no ground for the assumption that there can be a failure of equivalence in motion or transformation.

Can we say that the equivalents which return persistently in motion and transformation are compensatory ? Yes; the return of an exact equivalent is exact compensation. Heat is the compensation for the fuel that produces it; electricity is the compensation for the energy that is transformed into it; one molecule of water is

the compensation for two atoms of hydrogen and one atom of oxygen. A definite amount of matter or force pays for exactly the same amount in another form. That which disappears and that which succeeds are mutually compensatory. Fuel pays for heat, and heat pays for fuel. The account balances perfectly. Nature has no profit and loss account, no bad debts, no failures in compensation.

The assumption that anything can exist in the physical world without exact compensation appeals to the scorn alike of science and of common sense. Our patent office in Washington refuses to consider devices to produce perpetual motion, not because that office would place an arbitrary limit on the possibilities of mechanical invention, but because effect without cause, power without compensation, is impossible.

We shall be justified in the conclusion that the principle of balance presides over

the processes of Nature in the small as well as in the large — alike in atoms, satellites and suns — and that every transformation of matter and force, great or insignificant, includes the return of exact equivalents and compensation.

V

Man's Part in Nature — Progress by Antagonism — Nature's Process is by Test and Trial, by unfolding, changing, ripping up, undoing and redoing — Error dies in the Struggle.

APART from the world of physics, and yet inextricably entangled with the physical, is a realm in which exist thought, hope, imagination, reason, comedy, pathos, tragedy, friendship and love, revenge and hate, honor and humiliation, right and wrong, pleasure and laughter, pain, agony and despair; a world which is included in Nature, the same as mineral and vegetable, matter and motion, atom and sun. The thought, hopes, ideals and fate of man belong as truly to Nature as wood, muck, coal or stone.

The conscious part of man — that which sees, feels and comprehends — is of higher interest and importance than

anything purely physical. Newton comprehended gravitation, but gravitation could not comprehend Newton. Priestley discovered oxygen, but oxygen never discovered Priestley. The astronomers have seen far-off stars, but no star will ever see an astronomer. Our great laws and principles, our immensities, our planets and suns — they are senseless, they know nothing, see nothing, feel nothing. But man, frail, weak and defective though he be, can see, feel and comprehend.

So far as man is physical, we know that he is subject to the same laws that control other manifestations of matter and force. But what of the conscious part of man? Is that subject to the same laws of action and reaction, cause and effect, equivalence and compensation, that rule in the physical world? Is there one law for physical interaction, and a different law, or no law, for intellectual and moral interactions? Does compensation exist for

matter and force only, or does it exist also for the human soul?

The polarities of Nature, and the interactions between them, are quite as pronounced in human life as in physics; indeed, the polarities extend beyond the physical and human into the abstract, as in odd and even numbers. The polarities are sometimes antagonistic, sometimes reciprocal, and always, I believe, mutually corrective.

"An inevitable dualism bisects Nature," says Emerson, "so that each thing is a half and suggests another thing to make it whole — as, spirit, matter; man, woman; odd, even; subjective, objective; in, out; upper, under; motion, rest; yea, nay. . . . The same dualism underlies the nature and condition of man."

Plato perceived the same law of polarity in "the generation of contraries, of death out of life, and life out of death, of recomposition and decomposition."

Man faces on all sides the polarities of Nature, some of which — such as wet and dry, hot and cold, work and rest, pleasure and pain — were as apparent in savagery as they are in civilization. With increasing knowledge man perceives more and more of these dualities and invents new words to express them. Roget gives, in his "Thesaurus," more than twelve thousand words of opposite meaning. "There exist comparatively few words of a general character to which no correlative term, either of negation or of opposition, can be assigned," says Roget.

Hegel held the theory of "progress by antagonism" — "that forms which are opposed are really complementary or necessary to each other, and their conflict is limited by the unity which they express and which ultimately must subordinate them all to itself."

Sometimes we recognize that a stranger is a teacher or a minister by the tone of

his voice. The peculiarity in the voice is partly, but not wholly, oratorical. It is the voice of the orator who expects no answer, who anticipates that no one will "talk back" on equal terms — the voice undisciplined by antagonism. We may observe also the absence of the discipline of antagonism in the voices and manners of children, and of those who have too much or too little self assertion — in the mean and the haughty, the servile and the arrogant. The countryman adjusts himself with some trouble to the ways of the city, and the city man to the ways of the farm or forest, because these changes bring new antagonisms. We meet new antagonisms with every change from infancy to the grave — in learning to walk and to care for ourselves; in going first to school; with each new study; in the cares, duties and responsibilities which come with maturity; in heat and cold, dust and rain; in contagions; in the numberless enemies which

lurk in the water we drink and in the air we breathe; in old age, "that malady which no physician has ever cured."

Life is filled with issues — moral, intellectual, political, social, philosophical, commercial, physical — some being grave and others trivial. The mind of a man is a field of battle in which contending ideas, forces and interests meet and clash, each one seeking for the weak spots in the other. A thought or proposal arouses antagonistic thoughts and considerations, and a school of thought begets antagonistic schools. Monotheism rises up against polytheism, heterodoxy against orthodoxy, rationalism against superstition, epicureanism against stoicism, realism against idealism, monism against dualism, will against fatalism, tolerance against intolerance, equality against privilege, radicalism against conservatism, trades unions against employers, farmers against middlemen, middlemen against combinations, combina-

tions against competition. Our people are in perpetual antagonism concerning national, state or local policies. In these conflicts, as in all other conflicts, the stronger is victorious. Balance forbids a victory of weakness over strength. By strength I mean power, whether it be mental or physical, honest or base. A man is stronger than a horse through intelligence; one man rules a thousand or a million men through superior will, courage, wisdom or devotion, or by taking advantage of their ignorance, fanaticism or superstition. In our political contests the victory goes with the majority, which may be in accordance with right, or may be moved by misunderstanding or passion. The victory of wrong will in time produce its reaction, which will be favorable to right. "When bad becomes bad enough, then right returns." "Nothing is settled until it is settled right."

The history of civilization is the history

of the settlement of issues in accordance with their merits, of numberless victories of tolerance over intolerance, of reason over ignorance, of right over wrong. Nor is it true, as is sometimes assumed, that there has been no philosophical progress. The old contest between stoic and epicurean — in which some of the greatest minds of antiquity participated for five or six centuries — has been definitely settled. The verdict is expressed in the meaning which the two words have acquired in our language. The word stoic is applied to the strong, emotionless, self denying, unconquerable; epicurean to the fastidious, luxurious, self indulgent, weak. And modern thought recognizes that, while the two words represent opposite tendencies in human nature — one of which is in the main noble and the other in the main ignoble — neither has the substance upon which to build a philosophy of life. Nor is it likely that a philosophy of life can be built

upon one of two antagonistic ideas or principles.

The meaning taken on by our words "cynic" and "sophist" also records the final verdict concerning the merits of two ancient schools of philosophy. Antisthenes, Diogenes and Menippus, Protagoras, Gorgias and Hippias — all important figures in their time — were cynics or sophists, but common sense has disposed of their errors. Experience indicates that the theories which belittle human nature, and becloud the issues between right and wrong, will ultimately become obnoxious — that the very terms in which they are expressed will grow into words of ill meaning.

The failure to settle intellectual conflicts is not due so much to the misunderstanding of principles as to the misunderstanding of facts. No one doubts that rationalism is right and superstition wrong, but men disagree concerning what is rational and what

is superstitious. Wrong is not defended *as wrong*, but on the ground that it is right. The struggle of thought is to distinguish right from wrong.

In many issues there is truth on both sides, and a settlement is delayed by the difficulty in determining the true balance. Sometimes the truth on one side is perfectly balanced by the truth on the other side, and it turns out that there is no issue, as in the old conflict between inductive and deductive reasoning. We now know that each process is sound when correctly used, and that both processes are essential in reasoning. There are no particulars that do not harmonize with a generalization, and there is no generalization that does not agree with its underlying facts.

Life is a struggle. Wars end, but the war of the race — the antagonism of thought, the strife between men, between man and the forces external to him, within

the soul of the individual — ends not save it be with extinction.

Error gains many a temporary triumph, but the final victory is with truth. There is substance in truth that in the last balance outweighs error.

Nature's process is by test and trial, by unfolding, changing, ripping up, undoing, redoing. By contrast and conflict she tries sincerity and treachery, honor and dishonor, fitness and unfitness, courage and cowardice, truth and error. The conflict of ideas — between social and political systems, and between creeds and philosophies — is as rude as the conflict between the sea and land. Error dies in the struggle.

The fact, however, that the state of Nature is dualistic in so far as it is a state of conflict or alternation, should not be accepted as carrying the conclusion that Nature is dualistic in a fundamental sense.

The polarities of Nature would, if considered alone, represent Nature as a state

of confusion and anarchy. Since, however, order reigns in the midst of the confusion, we must accept the alternations and conflicts of Nature as being compensatory, and not as anarchic; as being under the control of law which, in its last analysis, is single — monistic, not dualistic — and master of all other forces, even of gravitation. Water, impelled by gravitation, falls to the earth, runs through the rivulets, brooks and rivers to the sea. But it will ascend again to the clouds, again refresh the land, again return to the clouds, continuing alternately to yield to and then to elude the gravitation of the earth. "What we call gravitation and fancy ultimate is one fork of a mightier stream for which we have yet no name," says Emerson. I venture to suggest that the "mightier stream" is named Balance.

VI

Action and Reaction in Human Affairs — From Paganism to Christianity, to Asceticism, to the Crusades, to Exploration and Commerce — Minor Interactions — Reaction from Words and Tones, Speeches and Thoughts.

ERROR and evil are located in deficiency or excess. Even excess in virtue is evil, an excess of humility being abjectness; of courage, rashness; of prudence, cowardice; of patience, indifference; of economy, parsimony; of generosity, waste; of deference, obsequiousness. And so also an excess of learning is pedantry; of ease, indolence; of comfort, self indulgence; of zeal, fanaticism. Right and justice are found in moderation, in the golden mean — in the true balance — between overdoing and underdoing, going too fast and too slow.

Philosophical history deals mainly with

the record of excess, and the reactions from excess, in human affairs. Observe how Lecky traces the culmination of the brutality and cruelty of Rome to the gladiatorial games, in which the spectacle of men fighting to the death in the arena — where it is said that more than one hundred thousand perished — delighted vast audiences, including the women of the first city in the civilized world. It was a monk, Telemachus, who finally rushed between the combatants, and "his blood was the last that stained the arena." The immediate reaction from cruelty is repugnance, aversion, detestation. Disgust for pagan savagery opened the way for Christianity, the religion of kindness, humility, peace and fraternity — the exact opposite of the pride, arrogance and ferocity of pagan Rome. The Christians praised peace, condemned war, abolished slavery, founded the first hospitals, and sought to alleviate human sorrow and suffering with zeal

which is without parallel. One extreme follows another in human affairs, like the swing of a pendulum. The reaction from excess is excess in an opposite direction. Excess in moral reformations takes the form often of fanaticism. Christian fanaticism developed in time a monstrous form of asceticism, glorified the hermit life, beggary, humiliation, flagellation, self torture, the neglect of cleanliness and the laws of self preservation, the breaking of family ties, and other forms of senseless sacrifice. Pagan excess led to the sacrifice of others for sport; Christian excess to the sacrifice of self to gain the favor of superhuman powers. The hero of the pagans was Cæsar, who had risen to fame on the corpses of 1,100,000 men. The hero of the age of asceticism was St. Simeon Stylites, who bound himself with ropes to putrefy his flesh; who, it is said, stood on one leg for a year and sat on a pillar for thirty years bending in ceaseless prayer. And what

should we expect as the reaction from asceticism? Again the opposite — the age of chivalry and the wars of the Crusades. The ascetics had condemned war, good clothes and the love of women. The knights of chivalry rode with love tokens on their breasts, in brilliant apparel, to rescue the tomb of Christ from the Moslem. In the wars of the Crusades 2,000,000 Christians perished.

Through the Crusades the peoples of Europe became better acquainted with one another, and the use of ships was greatly increased. Consequently the reaction from the age of the Crusades was the age of commerce, and out of commerce grew exploration, the discovery of America, the mapping of the globe. Aversion to the intolerance of the Middle Ages produced the tolerance of later times. A simple mechanical contrivance, the printing press, facilitated the liberation of thought. The heroes of the later centuries are the

discoverers, such as Columbus, Newton and Darwin.

Beneath these great interactions the historian observes minor interactions, covering shorter periods in the affairs of nations and communities, as in France when the indifference of the old régime to the rights of man led to the period of liberty, equality and fraternity, and the excesses of the Revolution to the horrors of the guillotine. Dickens, in "A Tale of Two Cities," says:

"All the devouring and insatiate monsters imagined since imagination could record itself are fused in the one realization, Guillotine. And yet there is not in France, with its rich variety of soil and climate, a blade, a leaf, a root, a sprig, a peppercorn, which will grow to maturity under conditions more certain than those that have produced this horror. Crush humanity out of shape once more, under similar hammers, and it will twist itself into the same tortured forms. Sow the same seed of rapacious license and oppression over again, and it will surely yield the same fruit according to its kind.

"Six tumbrils roll along the streets. Change these

back again to what they were, thou powerful enchanter, Time, and they shall be seen to be the carriages of absolute monarchs, the equipages of feudal nobles, the toilettes of flaring Jezebels, the churches that are not my Father's house but dens of thieves, the huts of millions of starving peasants!"

The atrocities of the French Revolution led to the rise of the empire, and the excesses of Napoleon to his destruction. Victor Hugo, in "Les Misérables," says of Bonaparte at Waterloo:

"Another series of facts was preparing, in which Napoleon had no longer a place: the ill will of events had been displayed long previously. It was time for this vast man to fall; his excessive weight in human destiny disturbed the balance. This individual alone was of more account than the universal group: such plethoras of human vitality concentrated in a single head — the world, mounting to one man's brain — would be mortal to civilization if they endured. The moment had arrived for the incorruptible supreme equity to reflect, and it is probable that the principles and elements on which the regular gravitations of the moral order as of the material world depend, complained. Streaming blood, overcrowded grave-

yards, mothers in tears, are formidable pleaders. When the earth is suffering from an excessive burden, there are mysterious groans from the shadow, which the abyss hears. Napoleon had been denounced in infinitude, and his fall was decided. Waterloo is not a battle, but a transformation of the universe."

Flint, in his "Philosophy of History," says:

"History always participates in some measure of philosophy; for events are always connected according to some real or ideal principle, either of efficient or final causation. . . . The more the mind of the historian is awake and active, the more, of course, it is impelled to go in search of the connection between causes and effects, between occurrences and tendencies."

The best chart of industrial conditions in past years in the United States is the chart of immigration — the coming of foreigners being in proportion to the opportunities for labor. The first great wave of immigration was consequent upon the period of prosperity which began in 1845, and which was stimulated later by the gold discov-

eries of California and the beginning of railroad construction. The tide of immigration declined with the panic of 1857 and through the civil war; it rose after the war, declined with the panic of 1873, rose by leaps and bounds with the prosperity which began in 1879, declined with the business depression of 1883–86, rose again, declined with the panic of 1893, and rose to the highest point on record in 1903 as the result of the preceding prosperity.

We recognize the consequences of business prosperity in other and numerous forms — in contentment, comfort, satisfaction with the party in power, improved wages, increasing luxury and happiness; while the results of declining trade are business failures, reduced wages, precarious employment, discontent with social and political conditions, want, despair, suicide.

The influence of the law of action and reaction can be traced more clearly in

those everyday human affairs which come under our individual observation than in the greater movements of mankind which are often imperfectly recorded. We act, and are acted upon. The people we meet make an impression on us; the impression may be for the moment or it may last through life. Bloom, fragrance, grace, harmony, beauty, majesty, affect us agreeably; deformity, imbecility, distress, cruelty, affect us unpleasantly. The plea of the unfortunate, the thought of our visitor, the opinion in the newspaper, the issues of the time, impress us in accordance with our moods or natures. Certain words, tones, sights, awaken echoes within us of old happiness or pain.

There are words and tones which produce beautiful reactions — the lullabies of the mother, the endearments of the lover, the voice of sympathy, the enchantment of music, the messages of the poets, the trumpet calls to honor and duty. And

there are words which produce misunderstanding, confusion, aversion, anger — the words of whining, complaining, fault-finding; of envy, jealousy, slander; of malice, intolerance, brutality.

The response to the public speaker is reciprocal to his power. If he be dull, the hearers are wearied; if he be convincing, courageous, forceful, the audience will kindle, and he may rouse them to laughter or tears, to indignation or fury, to generosity or sacrifice. He may change the opinions and convictions of some and the course of the lives of others; he may even save a city from slaughter or make a state. If his thought be really great, it may live through many ages, stirring generation after generation. The reaction of moral effort may be prolonged; it may even gain force with time, indicating its connection with some stupendous primal energy. The echo of a great physical convulsion dies quickly, but the echo of the

words of Confucius and Buddha, of Plato, Seneca and Christ, still lives. The voice of Socrates before his judges kindles men whose ancestors were untamed savages when Socrates spoke. Buildings decay, monuments fall, rivers run dry, races decline, but a great thought suffers from no impairment or decrepitude; it has the gift of immortal youth and strength.

VII

The Law of Consequences — The Good or Evil in Things is discovered by Observation of Consequences — Morals are determined by the Consequences of Human Actions.

A REACTION is the consequence of an action, an effect is the consequence of a cause, a result is the consequence of an antecedent. It is evident that the words *reaction*, *effect*, *result* and *consequence* express different manifestations of one law, usually called the Law of Causation, though it would be, I believe, more correctly named the Law of Consequences.

We shall understand more clearly the interactions in human affairs when we recognize that the meaning of the words *reaction*, *effect* and *result* is included in the word *consequence*. We may doubt the importance of reaction in our affairs, but

we shall not doubt the importance of consequences.

We are compelled to give consideration to consequences in the most trivial affairs. One has consequences in view when he strikes a match, sets a pot to boil, plants a seed, pulls a weed, sharpens a pencil, mends a fence. Shall I take an umbrella? I balance the danger of rain against the annoyance of the umbrella, and decide accordingly. Shall I change my coat? take another cup of coffee? walk or ride? Each question will be decided in accordance with my estimate of the balance of results. In considering possible advantages or disadvantages, gains or losses, we are balancing consequences, endeavoring to anticipate and weigh the results of our actions.

Regret is usually a reminder of a neglect or misjudgment of consequences, while repentance and reformation indicate a waking up concerning consequences. Our in-

terest, curiosity, anxieties, fears, hopes and ambitions are concentrated upon consequences. We seek advice when we are doubtful about consequences. Precepts and examples elucidate consequences. We work and rest, eat and drink, scheme and plan, spend and save, for consequences. We indulge or sacrifice ourselves for consequences. Cæsar expended a million lives for earthly glory; St. Simeon Stylites scourged himself for eternal gain. Our actions, so far as they are controlled by reason, are determined by our judgment of consequences.

"What? Does the tramp, the drunkard, the thief, consider consequences?"

The tramp roves because he prefers the freedom and pleasures of his life to the results of other ways. The drunkard drinks because the near pleasure outbalances in his mind the more remote pain. The thief steals because he values the quick and easy gain more than he fears detection.

Each man judges consequences by his own lights, which are distorted often by greed, animalism, ignorance.

The lesson of consequences which the individual often learns slowly and imperfectly, the sound business organizations acquire quickly and enforce by discipline. The salesmen in a successful store are characterized by tidiness, promptness and a desire to please; the employees of the important railroads are not even permitted to answer insult with insult. The industry that is intelligently managed will avoid misrepresentation and deception, knowing that a reputation for truth and fairness is vital to continuous success. The shrewdest maxims of trade are built upon the observation of consequences.

That mind is the strongest which has the clearest judgment of consequences. The fools are those who know little about consequences. The child must be guarded because it is ignorant of consequences.

What we know of narcotics, stimulants, antidotes, hygiene, surgery, chemistry, agriculture, mechanics, commerce, culture, we know through the observation of consequences. The best razor, plough, sanitary system, plan of social betterment, is that which produces the best results. Knowledge, learning and experience deal wholly with cause and consequence. The science of astronomy seeks to comprehend the heavenly bodies and their influences upon each other. The science of chemistry explains the consequences of chemical action. The science of political economy aims to distinguish and mark the good and evil results of different systems of land tenure, taxation, trade and finance. The science of government would determine what political system is best for a people. The science of war seeks to know what arms, equipments, forces and manœuvres will inflict the greatest injury upon the enemy with a minimum of ex-

penditure. The science of language deals with the utility of words, pronunciation and forms of expression. And so on through the whole of human experience, knowledge seeks to distinguish that which has the best results from that which has inferior or evil results.

Our ideas of right and wrong are due to the nature of the responses to human actions. How do we know that truth is better than falsehood? Because we are better pleased with ourselves when we speak truthfully than when we lie; because truth is essential to understanding; because we despise lying in others; because lying leads to confusion, uncertainty, enmity, and to other evil consequences. And so also we have formed a judgment of loyalty and treachery, cruelty and kindness, virtue and vice, by their consequences.

Our laws, customs and commandments would not prove to us that truth is better

than lying if our own experience did not confirm it. The Decalogue is effective only so far as Nature corroborates it.

Our common conceptions of morality are the results of the observation of human actions and their consequences — of cause and effect, of action and reaction. We know that certain actions are right and others wrong, as we know that bread is good and straw bad for food; that light clothing is more useful in summer than in winter; that cleanliness is better than filthiness; that the way to walk is forward, not backward; that mirth is pleasanter than grief.

As the value of a machine or implement is shown in its working, and the value of a tree by its fruit, so the merit or demerit of food, drink, medicine, acts and thoughts is determined by their results, reactions or effects — by their consequences.

VIII

Equivalence is the Test of Truth — Our Standards are Instruments of Equivalence — The Balancing of Alternatives — Reasoning is an Exploration of the Undetermined, a Search for Antecedents and Consequences.

IN mathematics, our one exact science, equivalence is the test of truth. Consider the unalterable nature of the truth expressed in the simplest equation: one plus one equals two. Nothing can change this result. That which is so impregnable is the principle of equivalence. One added to one equals two, and can equal nothing else.

Equivalence is the test of truth also in the physical sciences, so far as our knowledge is exact, as in chemical combinations. Our standards — the cent and dollar; pint and gallon; ounce, pound and ton; inch, foot and mile — are instruments

of equivalence. We measure accurately only by equivalents. In the absence of a standard, we fall back on resemblance, analogy, comparison, or some other substitute for an equivalent.

The chief substitute, used alike by the humblest and highest minds, is the balancing of alternatives — the measuring of one thing by its opposite. The rules of logic are unknown to the mass of mankind, but no one possessed of intelligence is unfamiliar with the process of balancing alternatives. Even the animals use it when they choose between two paths, or two actions, as between fight and flight. Men use it in every dilemma, great or small, from the choice between the simplest actions, to the issue of life or death. Is the thing under consideration good or bad? Shall I vote for A or B? Shall I act now or postpone? Shall I take a risk? Shall I stop or go on? Shall I change my course? Shall I do this or that? In these and other dilemmas, we

balance the consequences of one alternative against the other, and choose what appears to be the better. Facing death in two forms, we choose the better way. Balancing alternatives, one will jump from a high window to the pavement to escape fire.

The moral dilemmas presented to us are not always limited to a clear choice between right and wrong. It is wrong to steal, but should one starve, or permit those dependent on him to starve, rather than steal? It is right to tell the truth, but should one tell the truth when it involves the betrayal of his comrades, his country, his family? It is wrong to deceive, but would not one be justified in deceiving the enemy who would destroy him? It is wrong to kill, but may not one kill in self defense?

The problem of morals presses constantly upon the human race, presenting to each individual in turn new trials, difficulties and repugnant choices. Each must, to a large degree, choose his own

way, fight his own battle. These are the facts which confuse our ethical counselors. It is not possible to act always in exact harmony with our moral code. If one is so placed that he can save his mother from starvation only by stealing, he will violate the fifth commandment if he permits her to starve, and he will violate the eighth commandment if he chooses to steal. The choice between two evils often comes to the individual suddenly and imperatively. He must act at once, rendering a decision for which there is often no precedent known to him. The Decalogue which he can recite, the philosophical analysis of the evolution of ethics, do not aid him.

He who is thus tried, and who desires to do right, will choose the course which is least evil. He will balance the alternatives, exactly as does the one who jumps to the pavement rather than remain in the burning building.

Other alternatives crowd upon us. Na-

ture presents to us almost continuously the choice between near pleasure and remote good. Shall I rest now and enjoy myself, or shall I work, postponing my enjoyment? Shall I give the years of my youth to study or to play? Shall I accept present privation that I may in time enjoy security? Shall I consider my own interests wholly, or shall I make a sacrifice for others? Shall I stay at home in comfort, or shall I risk my life for my country? Shall I disown my faith, or shall I accept death by torture? Numberless are the choices between the near and the remote good which men must make. The lower men show little appreciation of the remote good, save as they are inspired by the instinct of self preservation. The higher men are distinguished by their high valuation of the remote good — by provision for the future, by attention to health, by interest in culture, by sound investments, by building business, houses and charac-

ter substantially, by a high estimate of honor and duty.

Reasoning is an exploration of the undetermined—an elucidation of the unknown through the known or the discoverable. There is no difficulty in measuring with exact standards to measure by, and with something tangible to measure—for example, in determining the number of cubic feet in a room, or the power of an engine. Reasoning, which is easy so far as it deals with exact equivalents, becomes difficult when applied to things the equivalents of which are unknown. The mind instinctively seeks for the unknown equivalents, and finds them in antecedents or consequences. Chemical experimentation is a search for consequences; bacteriological investigation is a search for antecedents. The search in both cases is for equivalents by which we may determine the nature and meaning of the thing tried, or its relations to other things.

The syllogism in logic is a form by which one may advance from antecedents to a consequent. The essence of a syllogism is this: that a premise includes all of its consequences. If a premise be true, its consequences will be true; if it be false, its consequences will be false. Conclusions, corollaries, deductions, judgments, inferences, discoveries and estimates are consequences — each following from an antecedent or antecedents.

The failure to consider, or to estimate correctly, the consequences of a position is fatal in reasoning. This is illustrated in the case of a number of schools of thought holding conclusions concerning the most important questions of life which are in contradiction to human experience or to reason — for example, idealism and fatalism.

That form of idealism which denies the existence of matter, has been supported by many famous minds, in neglect of its

consequences, for we know that no idealist could act as if matter had no existence — could live and move about in contempt of mud, stone walls, mountains, rivers, seas, snow, ice, fire, food, poison, gunpowder, clothing, beds.

Fatalism, known under different names, as foreordination, predestination, necessity, determinism — the theory, in its logical form, that man is an automaton, an instrument moved and played upon by external influences or powers — has been defended by many eminent theologians, philosophers and other thinkers, including some distinguished modern scientists. Observe, in the face of the intellectual prominence of the fatalists, how completely the consequences of fatalism refute that theory. One convinces himself that fatalism is true, that he and all other men are automatons. He must convince himself through reason. But an automaton cannot reason. He convinces himself through

reason that he is an automaton without reason!

The method of reasoning justified by experience, used by men in contact with the problems and difficulties of life, whether the problems and difficulties be the most simple or the most complex, is the method of common sense — the testing of antecedents by consequents, and of consequents by antecedents.

We judge the value of a machine, a field, a cow, a pig, by what it will produce; a picture, a scene, a play, a spectacle, a poem, a song, a book, a thought, by what it gives back to us; a creed, an opinion, a plan, a policy, a system, a philosophy, a deduction, a conclusion, by what we believe its consequences are or will be.

We estimate the value of a nation, a race, by its history, its antecedent record. The calculations of future events by the astronomers are based on antecedent ex-

perience. We must judge what will be by what has been. We search alike for good seeds and evil germs that we may propagate the one, and destroy the other.

To comprehend the unknown seed, we plant it and observe its consequences. To comprehend an unexplained crime, we search for its antecedents. The process of reasoning, even of the most abstract reasoning, is the same. An advance in knowledge, from the humblest step to the highest scientific achievement, comes from the investigation of antecedents or consequences.

As a physical interaction includes cause and effect, and perfect equivalence between them, so does the mental interaction which we call reasoning include antecedent and consequence, and perfect equivalence between them. We are unable to think of antecedents and consequences as being other than exact — of peaches as growing on apple trees, or of acorns that produce

potatoes. The measure of truth and falsehood will be found in their equivalents — in their antecedents and consequences.

IX

Compensation in Human Affairs — Problems of Business are Problems of Compensation — Right is accomplished by rendering Equivalents — Duty is a Debt, literally a Due — The Golden Rule is a Law of Equivalent Exchange.

IN primitive times trade was by barter — a fish for a rabbit, a shell for a cocoanut, or service for service — a direct exchange of articles or labor. Modern commerce is still correctly designated as "trade" or "exchange," though methods are improved. Money, drafts, credit and transportation are instrumentalities of exchange, of balance. I exchange my labor for money, which is good in exchange for whatever may be in the market. A debt is a deferred balance. A promissory note is an agreement to settle a balance. A bank check is a draft upon a balance in bank to close or reduce a balance else-

where. Systems of accounting are agencies of balance. The correctness of bookkeeping is tested by a balance.

Interest is the penalty for a postponed payment, for a delayed balance. The business done on a cash basis is balanced continuously; the business done on credit is out of balance, involving risk. The delay of compensation is dangerous. Failures, bankruptcies and business panics are due to debt, the neglect of compensation.

Life consists almost wholly of buying, selling, paying. There are no gifts, nothing that does not call for an equivalent. If we cannot pay for gifts in kind, we must pay in gratitude or service, or we shall rank as moral bankrupts.

If I would have a good situation, I must pay for it not only in labor, but in promptness, intelligence, faithfulness and good manners. If I would have good service, I must pay not only in money, but in con-

sideration, recognition, appreciation, fairness. I can hold no one to me if I misuse him.

All things are to be had for the buying. Would you have friends? Then pay the price. The price of friendship is to be worthy of friendship. The price of glory is to do something glorious. The price of shame is to do something shameful.

Friendship, glory, honor, admiration, courage, infamy, contempt, hatred, are all in the market-place for sale at a price. We are buying and selling these things constantly as we will. Even beauty is for sale. Plain women can gain beauty by cultivating grace, animation, pleasant speech, intelligence, helpfulness, courage or good will. Beauty is not in the features alone; it is in the soul also.

Good will buys good will, friendliness buys friendship, confidence begets confidence, service rewards service ; and hate pays for hate, suspicion for suspicion,

treachery for treachery, contempt for ingratitude, slovenliness, laziness and lying.

We plant a shrub, a rosebush, an orchard, with the expectation that they will pay us back. We build roads, mend harness and patch the roof with the same expectation. We will trust even these unconscious things to pay their debts.

Some of our investments are good, and some are bad. The good qualities we acquire — moderation, industry, courtesy, order, patience, candor — are sound investments. Our evil institutions and habits are bad investments, involving us in losses. We become debtors to them, and they are exacting creditors, forcing payment in full in money and labor, and sometimes in blood, agony, tears, humiliation or shame.

We recently had in this country the institution of chattel slavery, which we had cultivated for two hundred years. Preparatory to going out of business, this insti-

tution called on us for final settlement. Our indebtedness, which proved to be large — amounting to more than half a million lives and over six thousand million dollars — was paid in full. It seems strange that our institution of slavery, with no standing among the great powers of the earth, should have been able to collect such an indemnity in blood, treasure and pain from an enlightened people, taking a drop of blood from the dominant race "for every drop drawn by the lash."

We are administering compensation continually in our praise and blame of our fellow men — in applause to a poet or discoverer, in condemnation of the greedy and rapacious, in aversion to injustice, in love to our benefactors.

"Each day," as Emerson says, "is a day of judgment." We are judged continually, and usually correctly, by our associates and friends. And we are constantly paying penalties to or receiving rewards from

our judges — penalties in the indifference, dislike, contempt and detestation of our fellows; rewards in their appreciation, confidence, good will and love.

The vulgar receive no respect, the heartless no sympathy, the rapacious no affection. It is better to be a dog that has earned a little love than Cæsar in triumph, his enemies on his chariot wheels.

Compensation is in the frost on the window pane, and in the sunset of gold and crimson and purple, which reward the artistic sense in the minds even of the forlorn and poor; in the hope in the hearts of men which makes life endurable; in the first cry of the infant which rewards the mother's agony.

Right is accomplished by rendering equivalents. Duty is a debt, literally a due, which we owe to ourselves or to others. The Golden Rule is a perfect law of equivalent exchange, and Kant's "categorical imperative" — "Act according to that

maxim only which you can wish at the same time to become the universal law" — is also an exact law of reciprocity.

"The real first truth of morality," says Victor Cousin, "is justice. It is justice, therefore, and not duty, that strictly deserves the name of a principle." "Universal justice," says Aristotle, "includes all virtue." "Justice is the greatest good," says Plato.

Justice is the foundation of retribution, vindication, reparation, obligation, reciprocity, accountability, duty. Justice is compensation.

Everything in Nature, conscious and unconscious, animate and inanimate, is busily engaged in paying its debts. By what system is this perfect accounting made? We see no books, observe no management, and yet the numberless settlements are made with as much exactness as if each one were superintended by a group of experts, combining more of knowledge and justice than

are possessed by all of the mathematicians, scientists, thinkers, philosophers and judges in the world. We cannot explain this accounting on the theory of chance or accident; we must conclude that it is the consequence of a supreme power or principle of order, right and justice which regulates the affairs of the world.

X

Order is Regulation; Balance is Regulator. Right is Correctness; Balance is Corrector. Justice is Compensation; Balance is Compensator—Balance is Single and Supreme, without a Mate or Equal.

BALANCE is a word in which are concentrated, I hold, the higher meanings of the words order, right and justice.

The high and more general meanings of the word order—such as sequence, regularity of succession and method, right arrangement—fit well into the word balance. In other words, balance may include the higher meanings of order, but order does not include all of balance. We shall not find the fundamental explanations of the system of Nature in order. Effect, it is true, follows cause, and reaction follows action, in an orderly manner. This is a process, a general way of Nature. Such a

statement, however, gives out little light. But when we say that effect *balances* cause, that reaction *balances* action, then we make a distinct advance toward unity and light.

Right is a word of broad and noble meaning, but it also does not fit completely into the fundamental explanations of the system of Nature, or apply as perfectly as does the word balance to every interaction.

The figure illustrating justice is a goddess blindfolded, holding the scales of balance in her hands. Justice is balance in human affairs. Balance is wider than justice, since it includes justice and more than justice. There is no justice in the moon, where there is no conscious life, but balance is there.

Balance includes order, right and justice, but none of the latter can include completely the former. Balance is an active, governing principle, supreme, central, automatic. Order is regulation; bal-

ance is regulator. Right is correctness; balance is corrector. Justice is compensation; balance is compensator.

As we advance in knowledge we perceive more and more of duality in the processes of Nature. Doubtless we shall know in time that all processes, save the supreme process, are double. We know now that the law of causation is misnamed; it is really the law of cause and effect. And so also the law of evolution is actually the law of evolution and devolution. That the fit survive is only a half truth, the other half being this — that the unfit perish. That matter and force are indestructible is also a half of the complete truth that matter and force are indestructible and uncreatable. The law of consequences is really the law of antecedents and consequences, though I shall continue, for the sake of brevity, to designate it as single.

As Roget has shown, nearly all of the important words in our language are bal-

anced by words of opposite meaning. Even honor is balanced by dishonor, virtue by vice, right by wrong. But where shall we find the obverse of balance, its other half, mate or contrary, the force which matches balance on equal terms? I know of no such energy or principle. It has no name; no word in our language expresses such meaning. We say that reaction balances action, attraction balances repulsion, order balances disorder, and so on, but what balances Balance? These words in which I attempt to consider the balancing of balance become ridiculous, indicating the absurdity of the thought that balance is itself subject to balance. Balance is single and supreme, without a mate or equal.

XI

Natural Justice — Compensation in Human Affairs involves a Cycle of Beginning, Development and Conclusion, as Seed Time, Growth and Harvest — Tyranny is an Antidote for Mean Spiritedness, and Courage is the Antidote for Tyranny — Through such Rude Alternations do we move forward.

"BUT what of the failures of balance, of the awful accidents and terrible convulsions of Nature in which balance seems to be absent, or at least tardy or inefficient?"

The convulsions of Nature are not violations of balance; they are the phenomena connected with Nature's great interactions. Lightning is the shock accompanying the establishing of equipoise between two clouds, or between a cloud and the earth. An earthquake is the equalization of an internal pressure upon the crust of the earth. And so cyclones,

volcanic eruptions, floods, droughts, epidemics and other disturbances are the consequences of the antecedents which produced them.

"Do you admit, then, that things are not always in balance, and that man can defy balance?"

Man cannot defy balance. His acts must produce equivalent consequences. The use of rotten harness, imperfect boilers, defective flues, bad plumbing, weak buildings and faulty machinery will invite disaster. Whenever the internal pressure overbalances the strength of the boiler, we have what we call an accident, though it is not really an accident, being the result of ignorance or of a miscalculation of forces.

We invite evil consequences in overeating and overdrinking, in overworking and underworking, in neglecting sanitary precautions, in worrying and straining beyond our strength, thereby receiving many a

hard rap and sometimes a deathblow. We live in the kingdom of equivalence and compensation. Its laws are very strict, and we cannot evade them. If we violate them, we must pay the penalty.

To say that compensation is defeated because it requires time for completion is as unreasonable as if one should say that a journey is endless because its conclusion is not reached in an instant, or that the seed planted this morning is a failure because it does not produce an ear of corn this afternoon. We do not comprehend the Rocky Mountains through the first glimpse of one of its peaks, nor is the whole process of evolution to be found in one of Darwin's lines. And compensation also is revealed only by the whole of it — in its completeness — and not in one glimpse or line.

The processes of compensation in human affairs involve usually a cycle of beginning, development and conclusion — as

seed time, growth and harvest — for completion. A headache, separated from the indulgence that preceded it, is apparently wrong; connected with its cause, it is right. To judge a thing, we must know its antecedents and consequences. We cannot determine the exact status of a wrong, or of what appears to be a wrong, unless we know that antecedents do not justify it, or that consequences will not rectify it.

At the end of all our reasoning concerning the fundamental questions of life, we must choose between two alternatives — either (1) all things are in the process of being righted, or (2) the world-order is hopelessly wrong.

The correction of excess and deficiency is the province of balance. It would be impossible to make a list of the influences and forces which antagonize excess or deficiency, for we do not know, and doubtless never will know, all of them, as they

are included in the most subtle and minute phenomena of action and reaction, of cause and effect. Human law, for illustration, is designed to prevent excess or deficiency — not only statute law and common law, but laws of decorum, ceremony, courtesy, etiquette, custom, usage, manners, trade. These laws are more or less defective, themselves subject to excess or deficiency — as laws of despotism, privilege, monopoly, fashion — and sadly require the regulation of balance. To one who suffers from defective laws, the force that corrects them seems to be far off or even non-existent. We should remember, however, that balance works sometimes secretly, as in the imperceptible rhythm said to exist in all motion, and sometimes silently through centuries, as in the transformation of sunshine into coal.

The world has doubtless suffered more from tyranny in its many forms than from any other perversion of order in human

affairs. Yet we may perceive much of balance in the origin, development and conclusion even of tyranny. The tyrant rules because he is the stronger. Strength will rule over weakness. No protest or complaint, no weeping or wailing, will change that fact. Tyranny exists by the consent of the oppressed. Those are enslaved who are willing to be owned, who are too ignorant or cowardly to resist, or who consent to temporize. We enslaved the negro because he lacked spirit, but we failed to enslave the Indian. The Indian accepted death, and declined slavery. There were negroes, too, who declined slavery, and found freedom in the north or in death.

There is something in tyranny that rouses the spirit of men, even of dull and cowardly men. It may be that we owe more to our tyrants than to our benevolent autocracies, which have soothed and lulled us into indifference and inglorious

content. Tyranny is an antidote for mean spiritedness, and courage is the antidote for tyranny. Through these rude alternations do we move forward. We would value freedom little if we knew nothing of oppression.

As for the tyrant, he thinks of poison when he eats and drinks; he sees danger in the sullen faces of his slaves. He lives in dread of assassination, and often dies by it. He sees danger even where there is no danger. He cuts a sorry figure in history. His life is uneasy and his memory is detested. There are no happy tyrants. The great tyrants earn immortal infamy; the small ones secure the hatred of those who know them. The account, as we see it, balances rudely; doubtless it would balance to a hair if we could trace all of the remote antecedents and consequences of tyranny. Doubtless also, if we could trace the antecedents and consequences of all other evils, we should know that there is

no trouble which time will not heal, no wrong which is not in the process of being righted.

The universe is under the reign of law, which is everywhere — in things mean and minute as well as in things noble and great. So far as we have come into an understanding of these laws, we have found none defective.

No sound philosophy can concede that a law of Nature can be out of balance or in any way less than true and perfect. When we advance a theory to the point where it would prove that a law of Nature is out of balance and defective, we should know that the conclusion is wrong; that it is our reasoning, and not the law, that is out of balance and defective.

XII

Justice is Incomplete in the Present Existence — Our Life here is as a Broken Part of a Broader Life — If Death ends All, then the Mass of Mankind must live, toil, suffer and die under a Condition of Hopeless Injustice.

WE must admit, however, that justice is incomplete, in the life of the individual in this world alone — in that phase of existence which is bounded by birth as a beginning and by death as an end — if it be really true that death ends all, that the processes of compensation are interrupted by death. All men are endowed at birth with unequal strength, intelligence and moral qualities. One, born of superior antecedents, is reared under benign influences, develops into noble manhood, lives under favorable environments to a good old age, and dies tranquilly. Another, a woman, born of

low antecedents, is sold by a degraded mother into prostitution, lives a short and wretched life, and dies miserably. One, inheriting a mean intellect, lives on a level a little above the brute; another, the idiot, is more helpless than the brute. To one pair are born fine children, who grow up to helpful maturity; to another pair comes a drunkard, a degenerate, an imbecile or a criminal. One, who conforms to the opinions or institutions of his time, perhaps ignorantly or dishonestly, lives peacefully to old age; another, more intelligent or sincere, suffers martyrdom for his devotion to right and duty.

A few live long and pleasant lives, into which enters no unusual trouble, pain or misfortune. The lives of the many are short and broken, or rendered burdensome by slavish toil; "by griefs that gnaw deep, by woes that are hard to bear." Story pictures these, in his "Io Victis," as —

. . . "the low and the humble, the weary and broken
in heart,
Who strove and who failed, acting bravely a silent
and desperate part;
Whose youth bore no flower on its branches, whose
hopes burned in ashes away,
From whose hands slipped the prize they had grasped
at, who stood at the dying of day,
With the work of their life all around them, unpitied,
unheeded, alone,
With death swooping down o'er their failure, and all
but their faith overthrown."

Nor are the good always happy, nor the vicious wretched, in proportion to their deserts in this life. To the contrary, the good are often wretched and the vicious happy.

The life here is as an intermediate act in a play or chapter in a novel, in which the plot has neither opening nor conclusion, and in which the action, separated from the preceding and succeeding parts, is apparently without purpose, sense or justice — in which wrong and villainy may be triumphant and integrity and virtue trampled in the dust.

Perhaps our passion for fiction and the drama is due to the fact that in them we find that completeness and justice which we rarely see in real life. In them the good, after many difficulties and troubles, are triumphant, and the evil are finally undone.

Our fondness for biography and history — which abound also in rewards, retributions and other equities — can be explained on similar grounds. We discover that completeness and justice come to the individual slowly, but surely, in a historic sense; that those made great by accident are in time forgotten; that the tyrannical and the cruel are detested; that Columbus left a better legacy than Cæsar; that Newton is more honored than any English king; that Burns, the rustic poet, is better loved than Bonaparte, the conqueror. And we observe that Lincoln — whose youth was forlorn, whose life was full of care, who was murdered in the hour of his triumph — still lives in the hearts of his countrymen.

And we learn to believe that the books of Nature must balance; that Time glorifies the just, humiliates the arrogant, levels all inequalities, revenges all outrages, rights all wrongs.

Thus we find in both fact and fiction, and in the hunger for justice in our own hearts, some warrant for our old faith that the present life is only a broken part of a much broader life which will be complete, and in which all things will be made right and even.

If this life were broken into still shorter fragments, it would appear to be still more unjust. If, for illustration, each life consisted of one day only, then the lives of some would fall upon fair, mild or brilliant days, and others upon wet, cold or hot days; some upon the long days of June, and others upon the short days of December; and some upon days into which no sunlight would enter, and these would doubt even the existence of the sun.

But our life here consists of many days, and we know that the good days outnumber the bad ones; that the seasons return with precision, and that there are but slight variations in the annual rainfall and temperature of any given district.

A week or even a month of bad days does not discourage us, for we know that in the round of a year we shall have about so much of rain and drought, sunshine and fog, heat and cold. So far as the weather is concerned, Nature's average restores approximate equilibrium in the cycle of a year, and complete balance in a term of years.

The broader the basis of reckoning, the more perfect is the equivalence established by statistics and experience. While we have in our present life manifestations of balance in the alternations of the weather, in the recurrence of the seasons and in many other phenomena, and while a tendency toward justice is evident in all hu-

man affairs, it is clear that the life here is neither long enough nor broad enough to establish complete compensation.

A full consideration of the subject leads to the conclusion that, if death ends all, then the mass of mankind must live, toil, suffer and die under a condition of hopeless injustice — and hence that the only basis for the belief that justice will be completely established in human affairs is in the doctrine of the immortality of the soul.

This conclusion sheds much light upon the universality, persistence and rational meaning of religion.

XIII

The Essential Meaning of Religion is found in the Agreements, and not in the Disagreements, among Believers — There are Three Fundamental Religious Beliefs: (1) That the Soul is Accountable for its Actions; (2) That the Soul survives the Death of the Body; (3) In a Supreme Power that rights Things.

RELIGION is the oldest, the most universal and the most permanent of the institutions of men. We have no historic record of a people who were destitute of every form and manifestation of religion. It is nurtured by civilization; it existed among the earlier and lower men.

Tylor ranks perhaps as the foremost investigator of primitive beliefs. In considering the theory that there must be tribes so low as to be destitute of religious faith, he says:

"Though the theoretical niche is ready and convenient, the actual statue to fill it is not forthcoming. The case is in some degree similar to that of the tribes asserted to exist without language or without the use of fire; nothing in the nature of things seems to forbid the possibility of such existence, but as a matter of fact the tribes are not found. Thus the assertion that rude non-religious tribes have been known in actual existence, though in theory possible, and perhaps in fact true, does not at present rest on that sufficient proof which, for an exceptional state of things, we are entitled to demand." — Primitive Culture, i. 418.

Concerning the harmonies in religious beliefs, Tylor also says:

"No religion of mankind lies in utter isolation from the rest, and the thoughts and principles of modern Christianity are attached to intellectual clues which run back through far pre-Christian ages to the very origin of human civilization, perhaps even of human existence." — Primitive Culture, i. 421.

Spencer says:

"Of religion, then, we must always remember that amid its many errors and corruptions it has asserted and diffused *a supreme verity*. From the first, the

recognition of this supreme verity, in however imperfect a manner, has been its vital element; and its various defects, once extreme but gradually diminishing, have been so many failures to recognize in full that which it recognized in part. The truly religious element of religion has always been good; that which has proved untenable in doctrine and vicious in practice has been its irreligious element; and from this it has ever been undergoing purification." — First Principles, p. 104.

Religion is a word which has not been clearly defined. It has one meaning to Jews, another to Christians, another to Mohammedans, another to Buddhists. Even the Christians — being divided into many sects — hold views more or less in conflict concerning the meaning of religion. The lexicographers have defined the word timidly and haltingly, drawing no clear distinction between religion and theology.

What is the actual meaning of the great fact which we call religion? Where shall we find the "supreme verity" to which

Mr. Spencer refers, and the harmony of which Mr. Tylor speaks?

It would be useless to attempt to discover a ground of agreement in all of the thought of the world concerning religion, for the thinking on the subject has been voluminous and endless, good and bad, sane and insane. Nor should we expect to find an essential harmony in all religious organizations, great and small, temporary and permanent, powerful and insignificant. It is conceivable that a sect claiming to be religious is really irreligious.

We should seek for the essential meaning of religion in the broad principle or principles which have been accepted by great masses of men in places and times wide apart; in the permanent manifestations of religious sentiment, and in the instinctive, spontaneous and untaught beliefs common to primitive men which survive in more highly developed form among the enlight-

ened. And we must seek for it finally in the harmony of belief in the great religious organizations now in existence; for they must contain, in the natural order of growth, that which is worthy of survival in the religious faith that has preceded them. We must seek for the meaning of religion in the agreements, and not in the disagreements, among believers.

It is now conceded by enlightened theologians, as well as by philosophers, that religious institutions and beliefs have developed through the universal principle of evolution. And it follows that, as the oak is something more complete than the acorn, astronomy than astrology, man than the ape, so we shall find religious beliefs to be more perfectly developed in enlightenment than in savagery.

"For a principle of development," says Edward Caird (Evolution of Religion, pp. 43–45), "necessarily manifests itself most clearly in the most mature form of

that which develops. . . . It is the developed organism that explains the germ from which it grew. . . . We must find the key to the meaning of the first stage in the last."

1. *The Belief that the Soul is Accountable for its Actions.*

"I entertain a good hope," says Socrates, "that something awaits those who die, and that, as was said long since, it will be far better for the good than the evil."

A very old belief — which grows with man's growth and strengthens with his enlightenment — is the faith that he is accountable for his actions.

Tylor, who doubts that the doctrine of compensation was universal among primitive races, admits that it existed among many, and that it extended and developed with the growth of mankind. He says:

"A comparison of doctrines held at various stages of culture may justify a tentative speculation as to

their actual sequence in history, favoring the opinion that through an intermediate stage the doctrine of simple future existence was actually developed into the doctrine of future reward and punishment, a transition which, for deep import to human life, has scarcely its rival in the history of religion." — Primitive Culture, ii. 84.

D'Alviella says:

"The idea of a judgment of the dead, to which the theory of rewards and punishments naturally leads as its culmination, appears to have found its way into the minds even of very backward peoples." — Hibbert Lectures, p. 193.

Tangible evidence of the belief in accountability by primitive tribes now extinct being lacking, many scientific investigators deny that it existed.

Yet these investigators agree that propitiation was an universal rite among the lowest men, that it survived the increase of culture, and has existed to the present time. Why did primitive men propitiate the spirits of their dead? And why did

the later cults propitiate fetiches, idols and gods?

Propitiation is offered through fear to powers to which one acknowledges accountability. The culprit propitiates his judge, the slave his master, the subject his ruler. It is evident that the motive strong enough and general enough to impel the primitive tribes to propitiate the spirits of the dead must have been based on the belief that man was accountable to the spirits, whom he credited with extraordinary powers.

It appears to me that the sense of accountability was in the nature of things the first religious sentiment in the mind of man; that it preceded the belief in a future life and in superhuman powers; that it was based and still rests upon cause and effect, which are apparent to the dull, as well as to the enlightened; that the lower men perceived that the fruits of certain acts and things were good and of others

bad, and that this perception led inevitably, in the infancy of thought, *to the recognition of the law of consequences*, which is the law of accountability, of rewards and penalties.

The knowledge of primitive man begins with cause and effect. He discovers that water quenches thirst, game is found under certain conditions, a cave gives shelter, friction brings fire, the sun yields heat and light, some plants are poisonous, frost withers, lightning kills.

The first lesson learned by the infant is connected with cause and effect. The mother is the source of food, the cause of protection. Later the child learns that through effort it can walk; that some things are hurtful and others helpful; some bitter, some sweet; some heavy, some light. It discovers that some actions are beneficial and may be safely repeated; that others are injurious and should be avoided. The beneficial it recognizes as

good, the harmful as evil. That which hurts, even if inanimate, the child would punish; that which is pleasant it rewards at least with a smile. The baby becomes a judge, and gives forth verdicts. Before it can speak its first word, it knows much instinctively of cause and effect, of good and evil, recognizes the utility of rewards and penalties, and comprehends dimly the law of compensation.

The brute also, in proportion to its intelligence, understands cause and effect; it recognizes its enemies, comprehends its own weakness and strength, declines conflict save on terms favorable to itself, and knows the distinction in numerous cases between things harmful and things beneficial. The wisest man is distinguished intellectually from the lower men, and from the brutes, by his superior knowledge of cause and effect and of the distinctions between good and evil.

Man's belief in his accountability — that

is, in cause and effect — is fundamental. It begins with his first rational consideration of his relations to the external world and to the order of Nature, which he will later deify. Nature has two imperative commands which primitive man hears constantly — "Thou shalt" and "Thou shalt not." As his mind grows, the horizon of his accountability extends until it passes beyond the confines of this life. Believing in his own survival of death, he anticipates that in the after-life it will be "far better for the good than the evil."

It would be a reasonable assumption that the theories of a superhuman power or powers, of potent spirits, fetiches, idols, of many gods, and finally of one God, grew out of man's feeling of accountability. His sense of accountability forced him to believe that he was responsible to some power which sets things right. Man has been so impressed usually by his accountability for his sins — by "the dread of some-

thing after death" — that he has sought means of escape from it as he would from wild beasts, from flood or from fire.

D'Alviella (Hibbert Lectures, p. 179) says that religion from the first "developed a spirit of subordination" and "favored the sacrifice of a direct and immediate satisfaction to a greater but more distant and indirect good."

The theory of "a standard of duty prescribed by something loftier than immediate advantage," as Brinton expresses it, which was recognized dimly and roughly by the lower tribes, has been accepted by all later forms of faith.

We find the doctrine *that the soul is accountable for its actions* bedded in the foundations of religion, entering completely into the life here and into the life hereafter. It lies at the base of all religious theories of reward and retribution, of a day of judgment, of salvation and damnation, of heaven and hell.

2. *The Belief that the Soul survives the Death of the Body.*

Tylor claims (Primitive Culture, i. 424) "as a minimum definition of religion, *the belief in spiritual beings*," which appears (p. 425) "among all low races with whom we have attained to thoroughly intimate relations." He defines "the belief in spiritual beings" (p. 427) as including in its full development "the belief in souls and *in a future state*."

This belief, he says (p. 426), is "*the groundwork of the philosophy of religion*, from that of savages up to that of civilized man;" and constitutes (p. 427) "an ancient and world-wide philosophy."

Grant Allen says:

"Religion, however, has one element within it still older, more fundamental, and more persistent than any mere belief in a God or gods — nay, even than the custom of supplicating and appeasing ghosts or gods by gifts and observances. That element is the conception of *the life of the dead*. On the primitive

belief in such a life *all religion ultimately bases itself.* The belief is in fact the earliest thing to appear in religion, for there are savage tribes who have nothing worth calling gods, but have still a religion or cult of their dead relatives." — The Evolution of the Idea of God, p. 42.

Brinton says:

"I shall tell you of religions so crude as to have no temples or altars, no rites or prayers; but I can tell you of none that does not teach the belief of the intercommunion of the spiritual powers and man." — Religions of Primitive Peoples, p. 50.

D'Alviella says:

"The discoveries of the last five-and-twenty years, especially in the caves of France and Belgium, have established conclusively that as early as the mammoth age man practiced funeral rites, *believed in a future life*, and possessed fetiches and perhaps even idols." — Hibbert Lectures, p. 15.

Huxley says:

"There are savages without God in any proper sense of the word, but there are none without ghosts." — Lay Sermons and Addresses, p. 163.

Spencer says that the conception of the soul's survival of physical death,

"along with the multiplying and complicating ideas arising from it, we find everywhere — alike in the arctic regions and the tropics; in the forests of North America and in the deserts of Arabia; in the valleys of the Himalayas and in African jungles; on the flanks of the Andes and in the Polynesian islands. It is exhibited with equal clearness by races so remote in type from one another that competent judges think they must have diverged before the existing distribution of land and sea was established — among straight haired, curly haired, woolly haired races; among white, tawny, copper colored, black. And we find it among peoples who have made no advances in civilization as well as among the semi-civilized and the civilized." — Sociology, ii. 689.

Some recognition of the doctrine of a future life is found in the religious cults, ancient and modern, of which we have accurate knowledge. Even the ancient Hebrews, whose faith was more materialistic doubtless than any other that is known to us, believed in spirits within and without men, that Elijah "went up by a whirlwind into heaven," that the dead Samuel appeared to Saul, that "the Lord killeth and

maketh alive: he bringeth down to the grave, and bringeth up," and that all souls went at death to a vague and shadowy hereafter which could not be called life, and yet was not complete annihilation. The modern Hebrews repudiate the materialism of early Judaism. For more than six hundred years the Jewish church has accepted the doctrine of "the resurrection of the dead" in the creed of Maimonides.

In the same way the Chinese have repudiated Confucius. While the thought of Confucius is materialistic, the Chinese religions are profoundly spiritualistic. Not even Confucius, the adored and venerated philosopher of the Chinese, nor the writers of the Old Testament, could wean their followers permanently from the instinctive belief in a future life.

Instinctive religion — that which is permanent and untaught as distinguished from that which is temporary, isolated, or based on speculation or authority — toler-

ates no limitation upon the after-life of man. Here and there some teacher or prophet has proclaimed that only women, or the married, or the great or the good, or even that no one, will survive death, but such theories have left no permanent impression upon the religious convictions of mankind. The modern religious organizations of substance and permanence hold that all mankind will survive death.

We may conclude, in the light of all the facts obtainable, that the belief in a future life — *that the soul survives the death of the body* — is a fundamental precept of religion.

3. *The Belief in a Supreme Power that rights Things.*

The belief in superhuman influences and powers has been and continues to be universal, accepted alike by the lowest savage and the highest philosopher; by the deist, pantheist and atheist, as well as by the the-

ist. Primitive man had a low or dull conception of the overruling power. Sometimes he located it in a pebble or great rock; in a hill or mountain; in the dawn, sun, moon or stars ; in a mummy or idol; in his own ancestor; even in animals, fishes or reptiles. In whatever form he recognized it, however, it was to him a power that rights things, a beneficence to which he offered sacrifices and implorations.

The primitive interpretations of the supreme energy improved with man's growth in culture. The lower conceptions gave way to something better, and these to something still better — fetichism to idolatry, idolatry to polytheism, polytheism to monotheism.

It is sometimes said that Buddhism is a godless religion, and this assertion has been used as a foundation for the assumption that a belief in God is not fundamental in religion. It may be that Buddhism recognizes no supreme being, but it is

not true that Buddhism recognizes no power or powers that right things. No religion recognizes more completely than Buddhism the eternal forces of reward and retribution, as is illustrated in Karma, the law of just consequences.

Religion deals fundamentally with the higher duties and obligations of mankind. It has assumed naturally, indeed necessarily, that man is subject to some order or ruler possessed of unlimited power. While the lower cults have recognized in the fetich or idol a force which is helpful of or considerate to mankind, the more elevated races and sects have attributed more sublime qualities to the supreme force. A divine power is recognized in Varuna, the chief deity of the early Aryans; in Brahma, the absolute of the Hindoos; in Jehovah, the almighty of the Hebrews and Christians; in Odin, the all-father of the Norsemen; in Zeus, the highest deity of the Greeks; in Jupiter,

the chief God of the Romans; in Allah, the one God of the Mohammedans. The strongest words expressive of beneficence and omnipotence are applied habitually to God — the providence, the divine, the infinite, the eternal, the all-powerful, the all-present, the all-holy, the immutable, the most high, the ruler of heaven and earth, the king of kings, the light of the world, the sun of righteousness. We may safely claim that the belief *in a supreme power that rights things* is fundamental in religion.

XIV

The Fundamental Meaning of Religion is revealed by its History — Religion recognizes that Right rules the World — Science recognizes that Balance rules the World — Religion and Science are in Harmony, not in Conflict.

WE have, then, three fundamental religious beliefs:

1. *That the soul is accountable for its actions.*

2. *That the soul survives the death of the body.*

3. *In a supreme power that rights things.*

The belief *that the soul is accountable for its actions*, is the recognition that the law of consequences applies to the individual soul, that the good shall fare better than the evil, that men shall reap as they sow.

The belief *that the soul survives the*

death of the body, is the recognition that accountability does not end with the death of the body; that the wrongs which are not righted here must be righted elsewhere; that the good which is not rewarded here must be rewarded hereafter; that there can be no break in the processes of accountability. As science assumes that cause and effect, action and reaction, motion and transformation, are ceaseless in the physical world, so religion assumes that cause and effect, actions and consequences, are ceaseless in the soul of the individual. The religious doctrine of ceaseless moral accountability is identical with the scientific doctrine of ceaseless cause and effect.

The belief *in a supreme power that rights things*, is the necessary corollary of the two preceding beliefs. The doctrines that the actions of the individual will be balanced by their consequences, and that this process does not cease with death, include the recognition of a supreme

power of rightness — *a power that rights things.*

Combined, read from one into the other, what is the message conveyed by these three fundamental religious beliefs? Are they in harmony or in conflict? is the message discordant, or feeble, or subtle, or unworthy of the great fact which we call religion? or is it harmonious, simple and clear, a noble interpretation of divine truth? This is the message of the fundamental religious beliefs: *That man is accountable for his actions; that he is subject ceaselessly to the law of just consequences, to a supreme power of rightness.* The message is so clear and simple that it may even be more briefly expressed as the declaration *that right rules the world.*

This interpretation of the meaning of religion is not the interpretation of one sect or church, of one time or place; it is the interpretation of all sects and churches

that can be classed as religious, and of all times and places in which religion has been manifest. It is not the product of speculation or inspiration; it is the product of all human experience bearing upon the subject of religion. The meaning of religion, the message of religion, is found in its own history. Religion contains within itself its own story, as the rocks contain within themselves their own story. The message of religion is not vague, difficult or unworthy; it is plain, easy to comprehend; it is lofty and good. Mankind's recognition of religion as something holy, sacred and divine is fully justified by the interpretation of religion revealed by the history of religion — *that right rules the world.*

We have observed the harmony in the scientific interpretations of the system of Nature — that each interpretation points unerringly to a higher and single interpretation. And we now observe the same

harmony in the fundamental conceptions of religion, which point with equal certitude to a conclusion in unity with the supreme interpretation reached by science.

Religion, dealing with the essential obligations and relations of man, rests with the recognition of eternal justice — *that right rules the world.* Science, dealing with all truth, with the explanation and reconciliation of all phenomena, advances to a still broader position — *that balance rules the world* — a position so broad that it includes the fundamental grounds of religion.

Religion and science are in harmony, not in conflict. They have never been in real conflict. The appearance of conflict has been due to the misunderstanding and misinterpretation of both religion and science through the ages in which men have been groping and toiling upward from darkness to light.

XV

Religion has been misinterpreted and perverted — Science also has been misinterpreted and perverted — Religion answers for its Perversions as Science, Truth and Right answer for their Perversions — The Value of a Truth is measured by the Magnitude of its Perversions.

SCIENCE is a search for truth; it measures all things by truth, has no other standard than truth. As truth never conflicts with truth, the demonstrations of science are necessarily harmonious, the same original demonstration often being reached by strangers wide apart. Science consists of a stupendous unity linking the smallest and most obscure truths with higher truths, and these with still higher truths, on to their connection with fundamental truth. The achievements of science are due to the methods of science — to experimentation, investi-

gation, critical examination — to the patient weighing of facts by the standard of truth.

Religious thought has evolved necessarily on other lines. The problems of religion — the war between good and evil, the mystery of life and death, the nature of superhuman powers, of the government of the world, of the future state, of man's accountability — have appealed with continuous force to the interest and imagination of men. The yearning to know was gratified in the beginning by savage dreamers and mystics, who assumed to be, or believed themselves to be, inspired to utter divine truth. Religion has been interpreted by sorcerers and by sages, by impostors and by truth-seekers, by dull and by exalted minds. Some of the interpretations are childish or base; others supply to us our highest conceptions of honor, duty and responsibility. Great systems of faith grew up, each claiming to be built upon

sacred and infallible authority. The religious spirit is reverential and steadfast; men have yielded slowly the faith of their fathers. The Hebrews accept one authority, the Buddhists another, the Christians another, the Mohammedans another, and other authorities are accepted by other believers. Men have measured religious truth by authority, not authority by truth. Each of the great systems of faith assumes the perfect truth of its own authority, and denies the truth of all authority except its own, thereby admitting the existence of false authorities, false prophets and the worship of false gods.

Admitting many contradictions and imperfections in the interpretation of religion, shall we conclude that there is no truth in religion? Grant numberless errors and impostures, must we say that all religion is error and imposture? Let us be as fair to religion as to science. Have no errors or impostures been advanced in the name

of science? Consider only that branch of science which deals with healing. Have there been no false doctors in the world? no errors in determining the cause and cure of disease? no medical zealots, inflamed with a fanatical regard for their own methods, and with enmity for other methods? no conflicting schools of medical thought? Because of the errors, impostures and strife known to exist among those engaged in the art of healing, do people of intelligence conclude that the science of medicine consists wholly of error, delusion and imposture? that it has discovered no antidotes, no laws of health, no causes of disease? that sanitation and surgery have no merit?

The record of the science of healing contains superstitions as dull and rites as base as the lowest religious cults; indeed, the false medicine man and the false prophet have often been one and the same. Men have sought the healer of the body

because of their fear of the consequences of physical disease; they have sought the healer of the soul because of their dread of the consequences of moral disease. The healers, physical and spiritual, have dealt sometimes in nostrums, exorcisms, conjurations and sorceries; and again in better remedies which, on the one hand, have alleviated pain, cured disease and saved life, and, on the other hand, have strengthened men in right-doing, purified them, given them noble ideals of life and duty, and comforted them in trouble, sorrow, bereavement, agony, and in the face of death.

Let us not underweigh the fact that men have believed in their souls, in life after death, in responsibility that does not end, in an unbroken chain of cause and effect, in eternal justice — that they have spanned the abyss of death with a bridge of faith leading to a land where the inequalities, misunderstandings and wrongs of

this life may be righted. Intuition, instinct, or some other form of insight, sometimes anticipates science. The supreme law of compensation, which the early mystics recognized through that happy insight by which men grasp truth which they cannot yet demonstrate, science recognizes also after thousands of years of investigation and experimentation.

Let us not be impatient. Civilization was not made in a day. Our sciences have been built slowly; they are not yet completed, and we must assume that they never will be completed, unless it be possible that a time will come when truth will be exhausted. The search for truth has been slow and difficult, and many are the errors into which men have fallen. "The laws of Plato," says Lecky, "of the twelve tables, of the consuls, of the emperors, and of all nations and legislators — Persian, Hebrew, Greek, Latin, German, French, Italian, Spanish, English — decreed capital penal-

ties against sorcerers." When Montaigne denounced the belief in witchcraft as a delusion, its existence was accepted by the foremost magistrates, physicians and scientific men of France. Bacon regarded the Copernican theory as a strange fancy. Kepler, who discovered the laws of planetary motion, believed that a spirit guided the movements of each planet. The chemists of the eighteenth century up to the time of Lavoisier believed in the theory of "phlogiston," a curious error. Priestley, the discoverer of oxygen, died a firm believer in phlogiston. Guyton de Morveau, Macquer and others taught that phlogiston was something that weighed less than nothing! Political science has not yet discovered a way of governing an American city honestly and efficiently, nor has economic science reformed the inequitable distribution of wealth. The philosophers of the world, from the beginning of philosophy to the present day, have

reached no agreement concerning the motives of human actions or the meaning of morals.

Science has achieved much, but it is not at the end, or near the end, of achievement. It has struggled up from small beginnings; scientific men, wise men in their day, have accepted error. Science is not responsible for their errors; science has nothing to do with error but to reject it. And so religious men have accepted error, and religion is not responsible for their mistakes. It seems sometimes as if men must try all wrong ways, in every line of advancement, before they can find the right way.

The interpretations of religion have dealt with the questions: How does right rule the world? How will justice be done to the individual soul? It is not strange that there have been numerous and conflicting answers to these questions; and that many of these answers are crude and ignorant, and some even monstrous and forbidding.

The primitive mystics, recognizing dimly the law of consequences, clothed it in symbols adapted to their own comprehension and to the comprehension of their kind — in fetiches and idols, in strange gods, in numberless forms of penance and propitiation, in curious judgments, rewards and penalties, in heavens and hells which were circumscribed only by the limits of their imaginations. This may be said to their credit: they recognized rewards *and* penalties, recompense *and* retribution, heaven *and* hell. Their lowest conceptions of a future state included some recognition of moral responsibility and of the supremacy of justice. I do not despise their efforts. They expressed man's greatest hope — that right rules the world — in terms which they could understand. They could do no more. If that hope — I would prefer to say that truth — had waited for its complete and perfect exposition, it would doubtless be unexpressed to this day.

The earlier symbols gave way to better symbols, and these to still better; in time, doubtless, all religious symbols will give way to the truth which they symbolize. Enlightenment grows; superstition dwindles. Thought grows clearer. Many creeds have been revised. The doctrines of a hell of literal fire, and of eternal torment, have been abandoned by enlightened people. This advance must continue until the churches of civilization shall abandon the last form, rite, ceremony and doctrine which stand in conflict with the fundamental religious principle that right rules the world. They must in time accept the book of Nature as the book of God, and recognize that the truth-finders are God's prophets — that truth, wherever and whenever discovered, is the infallible revelation of God — that religious truth can be demonstrated only by reason, and that God's justice must be proved by the processes of Nature if it is to be proved at all — that God's jus-

tice, omnipotence and omnipresence can be proved more perfectly by the fact that cause and effect are equivalent, compensatory, ceaseless, all-powerful and all-present, than by any sacred book — that science, in its fundamental interpretation of the system of Nature, in its sublime conception of the permanence, uniformity and rectitude of the world-order, must be accepted as the defender, and not as the antagonist, of religion. There is no conflict in the revelations of Nature. In all times and places, Nature's laws have been the same, and truth the same. Never has Nature altered or truth changed.

Religion has been misinterpreted; it has also been perverted. While there are no cults known to us which do not recognize the law of consequences, there are many which teach that it can be evaded — that the favor of God can be gained by means other than by right-doing. And, in the name of religion, learning

has been persecuted, freedom suppressed, great and cruel wars have been waged, and monstrous crimes committed — including torture and many forms of murder, from the slaughter of children on the sacrificial altar to the butchery of sects and communities. How shall religion answer for these evasions, iniquities and atrocities?

Wrong seeks to disguise itself under the cloak of right; tyrants claim to be good, not bad; privilege, slavery, the suppression of thought, are represented by their beneficiaries to be right, not wrong — to be good even for the unprivileged, the enslaved and the shackled. Error disguises itself as truth. The liar does not say, "I am telling you a lie;" he says, "I am telling you the truth." The misinterpreters of history, biography, philosophy and science do not label their misinterpretations as errors; they proclaim them as truths.

Religion must answer for its perversions as right answers for the perversions of right, as truth answers for the perversions of truth, as science answers for the perversions of science. Right answers that its perversions are wrong, not right; truth answers that its perversions are errors, not truth; science answers that its perversions are unscientific, not scientific; religion answers that its perversions are irreligious, not religious.

Only good and truth can be perverted. The value and quality of a good or truth — the usefulness of the art of healing, the nobility of toleration and justice, the value of science — are measured with accuracy by the wide extent of its perversions. And so also the usefulness, nobility and value of religion are indicated by the magnitude of its perversions. I believe that the perversions of religion — unequaled as they are in magnitude by any other record of perversion — point unerringly to the con-

clusion that religion rests fundamentally upon a great and noble truth.

Religion is single, not plural. There is only one religion. The creeds written, the acts done, in the name of religion are religious in so far as they conform to the fundamental religious principle that right rules the world; they are irreligious in so far as they are in conflict with that principle.

XVI

Measuring the Value of Religion by its Denial — Only One School of Thought denies Religion — Materialism is the Doctrine that Wrong rules the World — Science and Religion meet on Grounds of Life, not Death; of Persistence, not Annihilation; of Right, not Wrong; on the Ground that the Laws of Nature are Uniform, not Contradictory.

WE can measure the strength or weakness of religion by the strength or weakness of its opposite, its denial. If religion be strong, its denial will be weak; if religion be weak, its denial will be strong.

The denial that right rules the world is the affirmation that wrong rules the world. The assumption that wrong rules the world has no foundation in the demonstrations of science — which point unerringly to the return of equivalence and compensation in the processes of Nature — and has had

slight recognition in human thought. It is true that men have held beliefs which lead *logically* to the conclusion that wrong rules the world, but there have been few who could accept that conclusion. No school of thought proclaims it, and it rarely secures lodgment in the human mind save as the consequence of pessimism or misfortune. We must conclude that the denial of religion which takes form in the assertion that wrong rules the world is weak, not strong.

The existence of a supreme power — whether it be accepted as personal or as impersonal, as knowable or as unknowable — is universally recognized. It is usually assumed to be a power of rightness. It could not be called a power of wrongness without accepting the weak conclusion that wrong rules the world.

The assumption that man is, or should be, accountable for his actions, is recognized in our civil and criminal laws, which

enforce penalties upon wrong-doing, and compel men to keep their contracts and pay their debts; in our moral code, and in our judgments concerning right and wrong. The alternative, that men should *not* reap as they sow, should *not* enjoy what they earn, should *not* suffer for their evil acts, is recognized nowhere. A few believe that wrong *does* rule the world, but no one can believe that wrong *should* rule the world.

Only one fundamental religious belief — the belief in a future life — is denied with force or persistence. Many men, including some of the great intellects of the world, from Confucius to Herbert Spencer, have doubted or denied that the soul survives the death of the body.

It is a curious fact that the doctrine of the annihilation of the soul has not yet acquired a definite name, though its adherents include a number of learned men, capable in the expression of thought and

in the coining of words. "Materialism" is the word used, in the absence of a better, to name this doctrine, but the dictionaries do not justify that use. Haeckel, recognizing its namelessness, has recently invented the word "thanatism"—in English, "deathism"—a fit name for the belief in the extinction of the soul. I shall, however, use the word "materialism," which is better known.

What rational foundation exists for the belief in annihilation? Has science discovered annihilation? No; science has not discovered annihilation; it has not discovered annihilation even in the physical body of man. At the change which, through old custom, we call death, the physical body of the individual is transformed under ordinary conditions into numberless other living bodies, the one life into swarms of life. Even if the physical body be consumed by fire, not one atom is annihilated, and life springs from

the ashes. Science is acquainted with motion only, not rest; with life, not death. Science recognizes the indestructibility of matter and force, that nothing in the physical world is annihilated. It comes to this — that the materialist, accepting the immortality of matter and force, must affirm that nothing dies but the soul.

There are other and more serious inconsistencies in the theory of annihilation. The ceaselessness of action and reaction, of cause and effect, is a fundamental postulate of science. "To *every* action there is an *equal* and opposite reaction." If death ends all, then the individual reaches in extinction a point where moral effect fails to follow moral cause, and the materialist must deny the ceaselessness of cause and effect.

One dies in the commission of a crime, when his heart is full of greed or lust or hate; if death ends all, he suffers no consequences of his sin; he goes to the same

silence which awaits the martyr who dies for man. If suicide be a sin, then the suicide commits an act, if death ends all, for which there is no penalty. The doctrine of extinction includes the assumption that there will be no reckoning hereafter for the tyrants, oppressors and scourgers of the weak, for the brutes who trample on women and children, for ingrates and murderers, for those who have tortured their kind — that man sows what he will not reap, and reaps what he has not sown.

Religion affirms, on the other hand, that death does not break the chain of cause and effect; that men shall reap as they sow; that there shall come a day of reckoning for the tyrant and the torturer; that the suicide shall not escape the consequences of self destruction; that no man shall escape the penalty of his sin, or be denied the reward of his virtue; that, for those who live justly, there is no trouble which will not end, no night of sorrow or

anguish which will not be succeeded by the dawn of peace and joy.

Religion declares that moral accountability is ceaseless; materialism declares that moral accountability ends in death. Religion is the recognition that right rules the world; materialism is the recognition that wrong rules the world. Religion declares that the wrongs which are not righted here will be righted hereafter; materialism declares that the wrongs which are not righted here *will be righted nowhere.*

Materialism is a sweeping denial of good and right. In denying the ceaselessness of action and reaction, it denies the uniformity of Nature; in denying the persistence of the soul, it proclaims the doctrine of annihilation, which is unknown to science; in denying the continuance of human accountability, it denies the foundation of morals. Materialism is the doctrine of eternal wrong, of hopeless in-

justice. Comprehending the nature and meaning of the theory of annihilation, we shall understand why it is nameless; why our language has failed to produce a word to fit its exact meaning; why its most famous living defender, Haeckel, has been unable to coin for it a better name than the somber and forbidding word "deathism."

We shall search in vain for any good or substantial fruits of materialism — for hospitals, charities or institutions of learning founded in its name or honor; for monuments which recognize it; for any part that it has played in the advancement of civilization; for uplifting songs, hymns, poems or speeches inspired by it; for a noble thought or sentiment that is dependent upon it; for sublime or heroic deeds in its defense. The doctrine of materialism, built upon an imperfect understanding of its relations and consequences, is a cold, dry, unstimulating faith which has

never reached the human heart save with the icy touch of hopelessness and despair.

The scientific interpretations of Nature have advanced constantly in breadth — into the uniform, the boundless, the universal, the ceaseless, the deathless. Upon these broad grounds, religion and science meet — on the ground of life, not death; of persistence, not annihilation; of right, not wrong; on the ground of the uniformity of Nature: that the consequences of human action are as definite as the consequences of chemical action; that the laws of equivalence and compensation which operate in the realm of physics act with the same unfailing certainty, and with the same eternal ceaselessness, upon the soul of man.

APPENDIX

APPENDIX

REVIEWS OF "BALANCE"

DESIRING that the theory herein advanced should be tested by intelligent criticism, I authorized a New York literary syndicate to send a preliminary edition of this volume, containing the foregoing matter, to a number of persons prominent in literary, scientific, philosophic or religious work, asking each for a brief review of "Balance." The letter of the syndicate was as follows:

"We are mailing to you to-day an advance copy of 'Balance: The Fundamental Verity,' by Orlando J. Smith, in which the author seeks for the fundamental harmony between physical science and natural religion. We should be glad to receive from you a review, not exceeding five hundred words, of this book, confined to any or all of these topics:

"1. Is the author right or wrong in his conclusion that scientific experience and the higher interpretations of the system of Nature point distinctly to one fundamental interpretation — the return of equivalence and compensation in all interactions?

"2. Is he right or wrong in his conclusion that the moral accountability of the individual, extended into a future life, is fundamental in religion?

"3. Is he right or wrong in his conclusion that the scientific conception of physical action as ceaseless and compensatory is identical with the religious conception of human action as being also ceaseless and compensatory; in other words, is Newton's axiom, 'To *every* action there is an *equal* reaction,' the counterpart of the religious doctrine of just consequences — that men shall reap as they sow?

"We hope to receive your judgment — whether it be favorable or unfavorable — of this effort to reconcile science and religion."

The reviews were not sought with the intention of including them in this volume. Since they have come into my hands, however, the conviction has struck me that they properly belong here — that the views

of so many persons, each one competent in his own field and each looking at the issue from a standpoint different from the others, would be welcome to the reader and helpful in this investigation.

Nothing written in these reviews is omitted here. Accepting comments critical and unfavorable, I also accept comments generous and commendatory. I reserve the liberty of responding to my critics in conclusion.

By W. H. MALLOCK.

Author of "Is Life Worth Living?" etc.

Mr. Orlando J. Smith belongs to the number, now happily increasing, of thinkers who, accepting the fundamental postulates of religion, frankly accept also the discoveries of modern science and endeavor to reconcile the two without mutilating either. Even if they fail to accomplish their task they are helpful because they illustrate its difficulties. Mr. Orlando J. Smith is helpful in this way.

In his previous volume, "Eternalism," Mr. Smith has taken his stand on the theory that the soul is

a self existing, uncreated and indestructible entity which, though temporarily associated with the body or a succession of bodies and partially determined in its conduct by the physical organism and its environment, still retains an inherent element of freedom, in virtue of which alone it is morally accountable for its actions. This theory, in his present volume, "Balance," he seeks to substantiate by analogies drawn from the physical universe, and in especial from what he calls the principle of balance itself, this being, according to him, the "fundamental verity" of Nature.

What Mr. Smith means by balance is, he says, Newton's law, considered under its widest aspect, that "to every action there is an equal and opposite reaction," and he goes on to argue that what is balance in the natural world reproduces itself in the moral world as justice. Whatever a man does, be it good or bad, there necessarily follows on this an equal and opposite reaction, of which he is either the beneficiary or the victim. Men, however, often die before this reaction is complete, and, unless their personalities survived physical death, the great law of justice, or moral balance, would be defeated. But such breaks in the cosmic law Mr. Smith regards as incredible. We are bound, therefore, by common sense to accept the immortality of the soul as a fact.

Nor do we depend, he adds, on this moral argument only. It is reinforced by the great scientific generalization that nothing, whether matter or energy, is ever created or destroyed, and, if the individual atom is indestructible, so also is the individual life.

Such, in outline, is Mr. Smith's argument. It is impossible here to do it justice in detail, but enough has been said to make intelligible a brief account of the faults which Mr. Smith must expect his critics to find in it. In the first place, as he himself admits, his law of balance is neither more nor less than the law of cause and effect viewed under a particular aspect. In the second place, it is, so far as it goes, neither more nor less than a system of pure determinism, and is associated with a principle of moral freedom in the individual only because Mr. Smith assumes this as a matter of faith, not because he has succeeded in discovering any scientific proof of it. In the third place, his law of balance being, on his own admission, convertible into a law of justice only by means of the doctrine that the human soul is immortal, his doctrine of its immortality is an assumption, no less than is his doctrine of its freedom, and the manner in which he attempts to show that this is not the case illustrates perhaps more clearly than anything else the kind of defect by which much of his reasoning is vitiated. Science, he says, shows us

that the individual life must be immortal, because science shows us that nothing which exists can be destroyed. That nothing can be destroyed is in one sense perfectly true, but in another it is equally false. If science shows us that in one sense nothing is destroyed, it shows us also that in another sense nothing endures. The material of the rose is indestructible, but the same rose never blossoms twice. Mr. Smith's argument can apply to the soul only on the assumption that the soul is a non-composite unity. His assumption may be true, but it has no foundation in science. Mr. Smith, indeed, himself, on page 128, gives his case away when he says that "the abyss of death is spanned by the bridge of faith." All, in short, that his writings can thus far be said to have done is to show what religion insists on adding to science, not what it succeeds in finding in it.

BACHELORS' CLUB, LONDON,
June 11, 1904.

By BENJAMIN KIDD.

Author of "Social Evolution," "Principles of Western Civilization," "Sociology," etc.

In this little book of one hundred and forty-six pages there is briefly put by Mr. Smith the secret of the social significance of all the principal religions

of the world. The present position of thought in relation to religious subjects is extremely interesting. The theory of balance which the author puts forward in this book as the fundamental truth of human knowledge brings partially into view the scientific side of a larger synthesis toward which we appear to be moving.

As the theory of evolution has come to be better understood we have in sight what may be called the two great protagonists in the drama of the human mind as it unfolds itself in history. On one side of this drama we have the individual concerned with his own welfare and with his own interests and emotions in a brief lifetime. With the lust of self preservation and self realization within these limits strong upon him, he listens, with ear at times fiercely attuned, as there pipe unto him all the sensualists of philosophy. Now in Lucretius and anon in Omar Khayyam he catches the echo of his mood against the insolence of things that would subordinate him to any larger meaning than that within the horizon of his own cultivated indulgence. In still wilder moods he dances to Nietzsche, for to that modern Fury, slinging flame, the systems of "cow philosophy" and "herding morality" which society and the religions which accompany it impose on him are intolerable. Are they not only the organized expres-

sion of the same insolence written still larger? The merit of Mr. Smith is that he sees all these impulses and the theories of things to which they give rise as no more than the broken fragments they really are. They form no basis for a true philosophy of our lives either as individuals or as members of society. They are only expressions of a want of insight in understanding the nature and balance of the synthesis of which we form part. They represent the feelings that resolve themselves on the larger stage of history in anti-social institutions, in the absolutisms of politics, in the tyrannies of chattel slavery or in the Cæsars who climb to power over the bodies of millions of their victims.

On the other side of this drama of the human mind we have again the individual. With a sense of some larger balance equally strong upon him, he cannot find and is destined never to find in sensualism any final reconciliation between what are to him the competing claims of self culture on the one hand and social justice on the other. Feeling responsibilities through his conduct to a process the meaning of which far transcends the reach of his own indulgences, systems of morality and religion are all expressions of the inevitable attempt to which the individual is driven to restore the balance. Right, in this larger sense, Mr. Smith therefore defines to be "the rendering of

equivalents." "Duty," he well says, "is a debt, literally a due, which we owe to ourselves or to others. The Golden Rule is a perfect law of equivalent exchange, and Kant's 'categorical imperative' — 'Act according to that maxim only which you can wish at the same time to become the universal law' — is also an exact law of reciprocity." From this position Mr. Smith's development is suggestive. The sense of justice in man he properly conceives to be the sense of necessary consequences and therefore of balance in a larger synthesis. Religion rests on the recognition of eternal justice — that right rule of the world. Science is advancing to the position that balance rules the world, "a position so broad that it includes the fundamental grounds of religion." From this it follows, Mr. Smith considers, that the truth finders are true prophets; that "truth, wherever and whenever discovered, is the infallible revelation of God."

Mr. Smith's little book is a system of philosophy in brief. In reaching, at the end, the conclusion that the fundamental principle of religious belief is the feeling that the moral accountability of the individual soul altogether transcends the meaning of the brief span of the individual's life and of the interests within it, he is not far from one of the ultimate positions of evolutionary philosophy. He is at the same

time very close to what always has been and to what probably always will be a vital precept of the highest forms of religion.

WESTGATE, SOUTH CROYDON, ENGLAND,
June 20, 1904.

By AMOS EMERSON DOLBEAR, LL. D.

Professor of Physics, Tufts College.

Vicissitudes, both physical and moral, run through the whole gamut of possibilities in life. Violence, suffering and injustice come to the best of mankind as often as to the worst, and it has always been so. Some, like Milton, have tried to justify the ways of God to man with preternatural assumptions, yet no one has succeeded with such arguments. Some have assumed there is no moral order, only chaos, in world ethics, though order is recognized in the scheme of inanimate things, even in earthquakes, volcanoes and overwhelming storms, and such stoical thinkers have abandoned the thought of any ultimate readjustments which shall make good all damages to sentient beings.

Mr. Smith thinks the solution is not so hopeless, and he seeks to show by analogies in the fields of our best knowledge that the so-called laws of Nature have for their foundation the principle of action and reaction which sooner or later evens up all malad-

justments. He calls this balance, and traces out the process in many fields, astronomical, geological, physical and meteorological. The doctrine of the conservation of energy implies that all the forms of energy have their exact equivalence in other forms of energy into which they may be transformed and balance is exactly maintained.

"Nature," he says, "has no profit and loss account, no bad debts, no failure in compensation," and this applies to all things, big and little. In this he is right. We could have no science if it were otherwise. He might have added that all processes in Nature go on in a rhythmical way and no excursion of a particle can ever outreach the reaction agency which shall exactly balance its adventure. A comet may travel away from the sun for a hundred years, but the sun will certainly pull it back again.

In human affairs similar laws of compensation are traced, and here, as in the physical domain, the rhythm is often in long periods, but never failure of balance.

Again, in Nature there are no known inconsistencies. No law of Nature is inconsistent with any other law. Indeed, this is our test for truth — that the statement which embodies it must be consistent with every other known truth, and by implication with every other truth, though unknown now.

All this is summoned by Mr. Smith to give coherence and strengthen the conviction entertained by all religiously minded persons that ultimately all the ills of life, all injustice and misery endured by individuals, will as certainly be corrected and balanced. On such a basis the whole of creation, so far as we have yet learned, is maintained and teaches that lesson.

There is no reason for holding that there is a hiatus between physical things and mental things. If there is not, then is Mr. Smith's contention sound and he deserves praise for calling attention to the significance of fundamental physical laws in their relation to natural religion.

TUFTS COLLEGE, MASS.,
May 31, 1904.

BY MANGASAR M. MANGASARIAN.

Editor of "The Liberal Review," Chicago.

"Balance" is the name of a little book with a great aim. Its author, Mr. Orlando J. Smith, sets out as a new Columbus to discover not another earth, but another truth which shall give to all known truths new meaning and worth. This truth he believes he has discovered and christens it "the fundamental verity." Lucid illustrations are massed together with

telling effect to show that Nature is equipped with a self curative genius which makes discord an impossibility. "That which is overdone in one direction is underdone equally in an opposite direction." This rhythm, this equivalence, which pulls the pendulum in one direction as far as it pushes it in another, is *the fundamental verity*, which, if grasped as universal and infallible, will remove from our shoulders what Shakespeare calls "the weary weight of all this unintelligible world," and induce Religion and Science, the two gladiatorial contestants in the modern arena, to replace their quarrelous weapons, with which they have given and received gashes deep and bloody, with the olive branch of peace and concord. Having undertaken to demonstrate that the physical world is in the embrace of laws which forever evolve order out of confusion, and that *Balance* is supreme in every detail of life, from the most momentous to the most minute; that throughout the length and breadth of the universe "the account balances perfectly;" that Nature has no failures and "no bad debts;" that balance forbids wrong — such, for instance, as the victory of one force over another — the author believes that he has found in this fact the unanswerable demonstration for the existence of a Supreme Being and the immortality of the soul. Thus, having given to these two ambitious propositions a new

front, he concludes that he has reconciled religion with science.

It is quite easy to reconcile enemies if they let you interpret their differences to suit yourself. Mr. Smith defines both religion and science with a view to reconciliation. It is no wonder, then, that they stop quarreling immediately. Even in Mr. Orlando Smith's religion there is an element of the supernatural, a *deus ex machina* who from the eternities rules the world and is pledged to see that in the end right shall prevail. This is theology, not science. Mr. Smith starts by trying to prove that Nature is just, orderly, and that its accounts are always perfect, and then, unfortunately enough, he drags forth once more the obsolete theological argument which science has already rent into tatters — that another life is inevitable since this life is not satisfactory. Having shown that there are no failures in Nature, he now says, "We must admit, however, that justice is incomplete in this life." That *however* destroys the position that Nature is, at present at least, governed by a Supreme Being, for how explain the existence of "incomplete justice"? The proposition that this Supreme Being must be given more time to work in — an eternity, for instance — that he may turn His failures to account, is pure metaphysics.

If for millions of years this earth could roll under

the eye of a Supreme Being and still be incomplete, what good reason have we to conclude that the Being who has failed hitherto is going to do better in the unknown future? If a Supreme Being and injustice are possible now, they are possible forever. What guarantee have we that the future will not be like the past?

Moreover, if a time should ever come when ideal justice shall prevail in all parts of the universe, then progress will be impossible and Mr. Smith's life beyond the grave will go a-begging.

The man who has one talent may be compensated with equal justice with the man who has ten. But why should one man have only one talent and his neighbor ten? Will there ever come a time when all shall have the same number of talents? And will life be worth living when such a time arrives? Why should one be a god and another a mere mortal? And, when truth has completely crushed error, what becomes of balance, or "action and reaction"?

Ideal justice is a theological dream. It has never been realized in the past, and it is not desirable that it shall be in the future.

Toward the end Mr. Smith develops into a full fledged pulpiteer, claiming that no "hospitals, charities or institutions of learning, songs, hymns, poems, noble thoughts or sentiments," are possible without

the doctrines of a Supreme Being and of another life. Thus the science with which Mr. Smith began so nobly is swallowed up in his theology. It is the lamb and the lion lying together, but with the one inside the other.

Mr. Smith's "Balance" is certainly a thought provoking volume, expressive of the intellectual quest for certainty which characterizes our age.

CHICAGO,
June 18, 1904.

BY EDWIN MARKHAM.

Author of "The Man with the Hoe," "The Social Conscience," etc.

"Balance: The Fundamental Verity," by Orlando J. Smith, is a notable volume, one that will be highly interesting to all who take a serious view of life and its fateful issues. It treats of the deepest concerns of our destiny, here and hereafter, and reveals some of the grounds and evidences of a scientific religion — a religion as firmly fixed as the foundation of Nature itself. The book is written in a style at once lucid and simple, direct as a singing bullet.

"Balance" is the work of an earnest man who is searching for a clew to the moral order of the world, seeking for a principle that adjusts the wrongs and

inequalities of this life. Mr. Smith finds this principle in the law of balance — a law that swings atoms and worlds and souls upon its pivot. Carefully (and logically, as I think) he proceeds to prove the great fundamental declaration of religion — the declaration that in the long swing of the pendulum right rules the world, and that men shall reap as they sow.

Let me give in my own way and order some of the arguments and conclusions of this able book. Nature reveals a tendency toward balance, which is the saving force in the world. Everywhere is ceaseless motion. All things are in flight, yet all things are under restraint, under control of a vast principle which curbs excess, restrains deficiency, restores balance. The sea assails the shore of Long Island and yet casts up the sand dunes that hold back the sea. The wagon pulls against the horse, while the horse pulls against the wagon. To every action, as Newton tells us, there is an equal and opposite reaction. Equivalence and compensation are universal. The world is built on the law of reciprocity, the principle of the Golden Rule. No thing and no one can escape the just apportionments of the unflinching law.

Science assumes that cause and effect, action and reaction, are ceaseless in the world of matter, and religion assumes that cause and effect, action

and consequence, are ceaseless in the world of soul. Moral as well as physical accountability stands on the impregnable rock of law — the law of consequences. If we look with a keen eye, we shall see that all things are busily engaged in paying their debts. Man is no exception to the law. We cannot escape our obligations. Unseen ledgers are kept by unseen assessors, and unseen sheriffs are on our tracks. "Something for nothing" is the fool's hope. The thief picks his own pocket; the assassin stabs his own breast. All this springs from the law of balance as Mr. Smith has expounded it.

Do you say that our little life on earth does not always right our wrongs and inequalities — that Death seems suddenly to break the arm of Justice? Then a moral universe is bound to give us another life to make this one swing in balance. Is justice imperfect in this world? Do we see villainy victorious and virtue trampled down? Then there must be another world to make this world right. Mr. Smith reasons, and reasons justly, that if death ends all, then the individual reaches in extinction a point where moral effect fails to follow moral cause. If death ends all, then a man dying red-handed suffers no consequences, and the law of balance snaps asunder like a rope of sand. If there be no other world, Caprice rather than Justice sits upon the throne. But this is

unthinkable. There is, then, a divine necessity for a life beyond this life.

Thus Mr. Smith reaches a ground in reason for those well nigh universal convictions among men — that the soul is accountable for its actions, that the soul survives the death of the body, and that there is a higher power that rights things. I thank Mr. Smith for his vigorous and satisfying argument, a demonstration of the fact that Religion and Science stand on the same rock.

WESTERLEIGH, N. Y.,
June 15, 1904.

By JOHN GRIER HIBBEN, PH. D.

Professor of Logic, Princeton University.

The search for a condensed formula which will explain the universe is a most alluring task, and many there are who have been attracted to it. It would seem a sufficiently difficult undertaking to limit one's inquiry to a single phase of the problem — as, for example, the reduction of physical phenomena to some all-comprehensive principle. The author's endeavor, however, in this work is more ambitious. He claims to have discovered a conception so ample as to embrace in its sweep not merely physical phenomena, but also social, moral, political

and religious phenomena as well, and all summed in a single word, *Balance*, a principle of universal compensation. The primary and most elemental illustration of this principle is found among physical phenomena and is expressed in Newton's law that "to every action there is an equal and opposite reaction." A similar law, Mr. Smith insists, obtains also in every sphere of human activity. In science it is expressed by the formula that balance rules the world; in religion, that right rules the world. "Religion and science meet," he says, "on the ground of the uniformity of Nature: that the consequences of human action are as definite as the consequences of chemical action; that the laws of equivalence and compensation which operate in the realm of physics act with the same unfailing certainty, and with the same eternal ceaselessness, upon the soul of man" (p. 146).

Let us examine this proposition, inasmuch as, forming the closing words of this volume, it stands as the author's conclusion of the whole matter. In general it should be observed that there is a serious danger attending any philosophy which is reduced to a single principle. There is an insidious tendency, which operates unconsciously perhaps, to force the formula unduly in order to make it cover every possible variety of cases. Even in the physical world

the author overlooks many negative instances of a most obvious kind — the disorder as well as the order in Nature, dissolution as well as evolution, death as well as life, the many catastrophes having no corresponding compensation, irremediable disasters, the dissipation of available energy and the newly discovered radio-activity, which seems to be accompanied by no equivalent consumption. But, granting the comprehensiveness of the formula for the physical world, it does not hold invariably and completely in the world of human activities. Is it true that the consequences of human action are as definite as the consequences of chemical action? Certainly, if we regard human action as merely physiological. But it is just at this point that the analogy breaks down. Every human action is so complicated by its varied relations, and is reinforced, modified or it may be neutralized by the interplay of the clashing or co-operating forces in its environment, as to render its consequences in many instances completely indefinite and incalculable.

The author concedes the fact that in the present existence justice is incomplete, but insists that our life here is but a broken part of a broader life, and in a future state all inequalities will be righted and a true balance struck. If, however, his analogy has any force as an argument, there should be observed

in human affairs, even in this present life, a compensation corresponding to the balance observable among physical phenomena, and, if his analogy has no force, then there is nothing in the uniformity of Nature which proves that the breach of uniformity as regards distributive justice in this present life will be compensated in a life to come. What is proved is this — that in the physical and the psychical we have two sets of radically disparate phenomena. The justification of the one cannot turn upon an analogy with the other. While in thorough accord with the author's conclusions — that man is accountable for his actions, and that in a future life eternal justice will be vindicated — nevertheless we must dissent from the method of reaching these conclusions. We insist that the basis for such a belief is not physical, but metaphysical, and that it is not the world without, but the world within, which justifies such a creed.

PRINCETON, N. J.,
June 3, 1904.

BY WILLIAM HENRY SCOTT, LL. D.

Professor of Philosophy, Ohio State University.

The author has seized a great truth and has traced its operation in the physical, the intellectual,

the social, the moral and the religious domains of thought. His book is not without its faults, but its main positions are impregnable.

1. Balance is, as he affirms, the central idea of science. The law of the conservation of energy, recognized as the broadest generalization of scientific thought, is only a deeper interpretation of Newton's third law of motion. It means that, whatever changes of form energy may undergo, and whether it is expressed in motion or in some other way, the total amount of it is always absolutely the same. Mr. Smith's discussion of the law of balance in the realm of material nature is intelligent and comprehensive and abounds in apt illustration.

2. Balance is also the fundamental law of the moral world. Right infallibly brings its rewards. Wrong infallibly brings its retributions. These rewards and retributions are constantly being capitalized in the nature of the agent. In ultimate analysis the reactions upon himself are the only *moral* consequences of his conduct, and the reactions that *count* in the moral calculus appear in his powers and tendencies. They make him stronger or weaker, better or worse, in some of his inclinations, desires, capacities or purposes. This result is inevitable. It is also immediate. There is no waiting for the dawn of another life. The effect begins at the moment the

cause begins. And it abides. It cannot be undone. The agent can never be again what he was before his act or what he would have been if he had not performed it. More than that, the effect becomes itself a cause and forever tends to work in its own direction — for good if it be good, for evil if it be evil. The balance is never lost. It is preserved without failure in a single instance and without interruption for a single moment. As the author puts it, "No sound philosophy can concede that a law of Nature can be out of balance" (p. 91).

Why, then, a future life? Not to repay present suffering with future happiness, as the author holds (chap. xii). That is a minor consideration which is absorbed in the essential ones. These are, first, that the most precious outcome of the universe may not perish. A moral being is the most consummate fruit of the constitution and course of things. That it should be blighted and destroyed seems irrational. That it should go on, fulfilling itself more and more completely, seems the demand of both justice and reason. Again, a future life is needful in order that the process of moral compensation may not be left incomplete. The moral life is a continuous and cumulative series of fulfillments, or, as I said before, moral rewards and retributions are constantly being capitalized in the nature of the agent. But if death

ends all it truncates the moral life. It brings that life to a sudden and final stop. On the other hand, a future state of existence provides for the just and natural continuance of the processes of moral action and reaction and for the conservation of all moral forces, moral tendencies and moral results.

This view vindicates the author's position that moral accountability extends into a future life, and vindicates it on higher ground than he assumes, and yet in closest agreement with his principle that balance is the fundamental verity.

3. From all that I have said it follows that Mr. Smith is wholly right in his conclusion that one law, the invariable law of equipoise, pervades both the physical and the moral universe. Balance runs through all. Below, above, here and everywhere, now and always, there is "one sole ruler — God; one sole rule — His law; one sole interpreter of that law — humanity:"

> "One God, one law, one element
> And one far-off divine event
> To which the whole creation moves."

COLUMBUS, O.,
June 30, 1904.

By EVANDER B. McGILVARY, PH. D.

Sage Professor of Moral Philosophy, Cornell University.

The main thesis of this book is that "balance rules the world" (p. 22). In order, however, to give balance this supreme place, the author is compelled to use the word in a sense that differs widely from the usual meaning of the term. Balance properly means a state in which the forces tending to move a body in opposite directions are equal, so that no motion results. But when the author says that "balance rules the world" he means that if the opposing forces are not equal a process is set up which tends to restore the balance in the ordinary sense of the word. He himself uses the term in the ordinary sense, as when he tells us that "a man out of balance falls." This ambiguity of the term vitiates his whole ethical argument. Let us place two passages side by side: "Man cannot defy balance. His acts must produce equivalent consequences" (p. 85). "Justice, which is balance in human affairs, is incomplete in this life" (p. 92). The former statement is correct only when balance is used in the *extraordinary* sense that the author often gives it. The latter statement can be justified only if balance is used in its *ordinary* sense. In the other sense there

is no reason to suppose that balance is not attained this side the grave. Take the case of the man who "dies in the commission of a crime," and who, if death ends all, "suffers no consequences of his sin" (p. 142). If balance requires — as perhaps it might should the word in its strict sense be turned into a metaphor — that like harm be done to him, so that the conflicting evils shall compensate each other, then, unless he continues to live after death, balance is defeated. But if balance requires — as it should in the author's special meaning of the term — that the criminal's deed should create a different situation, which changes the history of the world to the end of time, then it is not true that balance is defeated. *He* does not reap in his own person the consequences of his act, but neither does the falling body reap in its own circumference the full consequences of its fall when that fall is arrested. The resisting body gets some of the heat thus generated, and so does the surrounding air. The author's special balance is made good, not in the body itself, but in the whole system in which the event occurs. If the physicist in studying this phenomenon were to say after measuring the heat of the arrested body, "I do not find here full compensation for the arrested motion; hence let us wait till the next world, and then we shall find the deficiency made good," he would be

proceeding as our author proceeds when, failing to find that the criminal suffers here the consequences of his sin, he tells us that "there shall come a day of reckoning for the tyrant and the torturer" (p. 143).

ITHACA, N. Y.,
May 30, 1904.

By GARRETT P. SERVISS.

Author of "Other Worlds," etc.

It is a recommendation, not a condemnation, of this little book to say that its germ is to be found in Emerson's essay on "Compensation" and in his two short poems on the same subject. A dilution of Emerson is often an advantage, and Mr. Smith, who writes with notable clearness and simplicity, will no doubt appeal to many readers who would find Emerson more difficult.

Besides, this author has his own point of observation, as every author worth attending to must have, even when he builds on old foundations. The chief novelty in Mr. Smith's book — and he has packed it full of suggestiveness — is the development of the idea that religion is the counterpart of science in that it extends the principle of compensation, or equivalence — or, as he likes better to say, balance — from the physical into the spiritual world and from things

temporal to things eternal. In fact, the idea of "eternalism" as a theory of infinite justice, which he has developed in another book, underlies this one also.

It seems probable that many readers may rise from a thoughtful perusal of this book with new grounds of hope in their minds for the survival of human personality after death. They will feel more or less definitely that a scientific basis for belief in the immortality of the soul has been offered to them. The inequalities and injustices of this world are so many adverse falls of the dice of fate; but, inasmuch as those dice are not loaded, although some victims of merciless misfortune may believe that they are, all that is required for ultimate readjustment and complete restoration of balance is indefinite extension of the play. The great law of probabilities must vindicate itself in infinite time. The chances must all balance up in the end.

Our author is unquestionably right in maintaining that physical science knows no violation of the law of equivalence and cannot even conceive of such violation. In everything that science deals with, beginning with Newton's great law that to every action there is an equal and opposite reaction, the account, as Mr. Smith says, balances perfectly. "Nature has no profit and loss account, no bad debts, no failures in compensation."

I think that he is also right in his next step, wherein he affirms that the perfect equivalence of action and reaction is as easily discernible in the moral as in the physical world. This is something more than the asseveration of a truism. We are to take the statement as representing an experience as real as that of an experiment in chemistry. There is no break. The continuity of the great law is perfect. It runs straight through the material into the immaterial (or what we call the immaterial) universe.

This being granted, we must follow Mr. Smith in his next conclusion, which is that religion and science meet on a common ground, both being based upon the ceaselessness of cause and effect. "If death ends all, then the individual reaches in extinction a point where moral effect fails to follow moral cause," a result as repugnant to scientific as to religious thought.

This is a good book to ponder over.

BROOKLYN,
June 22, 1904.

BY ROBERT MACDOUGALL, PH. D.

Professor of Descriptive Psychology, New York University.

In his essay on "Balance: The Fundamental Verity," Mr. Smith approaches an ancient and baffling

problem — namely, the attempt to state the whole range of our experience in terms of a single fundamental law, a law, therefore, which shall give expression to our most complex social relations and to our highest aspirations and desires, as well as to the physical processes of life and to the facts of the inorganic world.

His starting point is the incontrovertible scientific doctrine of conservation — that no atom of force is dissipated, but only subjected to continuous transformation within a constant total. This maxim — that action and reaction are equal and opposite — he applies to the interpretation of social and religious phenomena in a series of interesting and readable chapters. In its complex forms, especially in relation to spiritual realities, this principle is more commonly called the law of compensation, but the author has preferred the more novel mode of stating the higher human attributes in terms of physical law, in a way which recalls the earlier volume of Drummond.

The title of the work, however, is, in a way, a misnomer. It is not balance, but balance tempered with optimism. This is involved in the very statement that it is an attempt to mediate between the concepts of science and the object of ethical and religious consciousness. Man's hope tips the scale in the direction of his ideal desires, and this passionate

aspiration is irreconcilable with the idea of a dead and literal balance. Place must be made for progress, for evolutionary change, involving a constant passage from lower to higher forms, for, not by accident nor convention, but as an inevitable function of his own nature, man conceives of an ideal purpose in the world, the existence of which must lead to a complete restatement of the problem of balance. "Nothing is settled till it is settled aright," says the author. "The good days outnumber the bad ones." "Right rules the world." These sayings are inconsistent with any balance discoverable in the actual world. They are comprehensible only under the concept of a life larger than that which we are now living, with which the present is continuous. In other words, if the author is right at all in assuming this idea as his starting point — and it is the one universal law of the physical world — its application means that every human hope must find an ultimate fulfillment in the summing up of reality, and that Nature itself cries out against the nihilism of death.

The most striking discussions of the book are those in which the writer analyzes the nature of religion and of the hope of immortality. The moral accountability of the soul is defended as the fundamental fact of religion, in opposition to the point of view which makes its essence consist in the belief in su-

pernatural beings, or a future life. These are but the necessary results of a logical working out of the former concept. In the second discussion the author points out that the heart of our desire for a future life does not lie in the craving for a continued existence, but in the idea of recompense.

His position seems unassailable on both these points. We seek a completeness in the purposes of the will which is nowhere to be found in this world. Human life is, as our author says, an act, not a drama — a set of beginnings which lack their finales. But such a life is essentially unsatisfactory and horrible. We demand that there shall somewhere be found dramatic unity in the world of human purpose and action. But this completeness, which can be manifested only in an existence which contains the reciprocal of every element, stubbornly refuses to appear within the limits of our present life, and our impetuous imagination leaps the chasm of death and in the bounds of a future existence constructs the ideal of a perfect recompense.

The book, which stimulates much thought, is pervaded by a transparent sincerity of purpose and characterized by a pleasing candor of statement.

SEDGWICK PARK, NEW YORK CITY,
May 21, 1904.

By CHARLOTTE PERKINS GILMAN.

Author of "In This Our World," etc.

"The law of compensation," of "returns," of "equivalents," has always appealed to philosophers, and its application to human life is no new one. But Mr. Smith claims for this law absolute preëminence. It is to him *the* law of the universe.

His book is short, clearly and strongly put, and so full of truths — patent, visible, unquestioned truths — that one has to think very steadily in order to distinguish between these truths and the truth.

The author is seeking to establish the perfect justice and inevitability of post-mortem retribution; that the soul is accountable for its actions and surely meets its reward; that as it visibly does not meet this reward on earth it *must*, according to this universal law of compensation, meet it elsewhere.

On page 6 is a typical instance which shows as well as any how a statement may be true and yet not prove what it is meant to.

Here we find: "Excess can exist only through a corresponding deficiency, and a deficiency can exist only through a corresponding excess. A deficiency in crops is balanced by an excess in prices; an excess in crops is balanced by a deficiency in prices."

This "balance" presupposes a market, which Nature does not always provide. It involves other conditions not assured. One might say that a deficiency in crops was "balanced" by a famine. A consequence is not the same thing as a return.

In chapter vi, on the force of "action and reaction in human affairs," the author, in proving this position, weakens the claim for a further reaction on the individual after death. He quotes from various authors, citing historic instances to show that acts of cruelty and wrong produce an equal reaction in later days; that the French aristocracy caused the Revolution, and Napoleon resulted in Waterloo. Now, if the evil acts of human beings have their inevitable reactions here, is it then claimed that they have other and different reactions afterward?

Do they react twice — first in their visible consequences upon other persons, then in invisible consequences to the same persons? That every act has its result, or, rather, that every act is part of an endless series of transmissions of energy, is clear enough, but that the consequent effects come back to each individual is another matter altogether.

Much stress is laid by the author on the prevalent religious beliefs of extremely primitive savages, as if what the lowest and most ignorant human beings commonly believed was therefore more likely to be

true. That cave men believed in ghosts and a future life does not seem to prove these things any more than their beliefs about the facts of Nature prove those.

Men grow wiser with social evolution, and the very existence of such a book as this, the need for elaborate argument based on science to establish what our hairy ancestors accepted undoubtingly, shows that the mind of to-day does not agree with that of the remote past.

The fundamental verity of universal right may be held without this very ancient theory of personal retribution after death.

NEW YORK,
May 18, 1904.

By JACOB VOORSANGER, D. D.

Professor of Semitic Languages and Literatures, University of California.

I have read "Balance" with the greatest interest and gratification. The author is right in his conclusion that compensation is fundamental in Nature, physical and moral. Nature rewards and revenges. She is kind to her lovers, stern to her abusers. She has a blessing for every ill, an ill for every blessing. She has ice and snow for heat, and she has the cooling leaves of Ceylon for defense against the tropics.

She has poison and its antidote, illness and its cure, life and death, as we use the words, both cognate expressions of the law of compensation that equilibrates all things in existence.

Moral accountability is founded in religion. It is, in fact, the basis of religion. Deity and divinity, the source of perfection and holiness, cannot be conceived without an accompanying sense of responsibility and accountability. Unless we judge our acts by the divine standard, and so struggle for holiness, God is only an abstraction with which we could dispense. On these subjects the views of religion and science are identical.

San Francisco,
June 26, 1904.

By GEORGE WILLIAM KNOX, D. D.

Professor of Philosophy and History of Religion, Union Theological Seminary, New York.

This volume belongs to the literature of inspiration and not of science. It will have the larger reading and possibly the larger results. It appeals primarily to the emotions and should not be submitted to the cool judgment of the intellect. It is, in fact, an expansion of the thought already set forth in Emerson's essay on "Compensation."

Its proposition that "balance is the fundamental verity" belongs to a region incapable of proof. As our author illustrates, it may be set forth in varying forms: "To every action there is an equal and opposite reaction;" "Effects follow causes in unbroken succession;" "Matter is indestructible;" "Force is persistent and indestructible;" etc. In other forms so Plato perceived, and so before Plato the Hindus declared, deducing from it the law of Karma as the one unchanging reality in the phenomenal world. On this various cosmogonies have been reared, many of them, like our author's work, largely rhetorical and sometimes fanciful.

These cosmogonies are simply the principle of causality objectified. That principle is not deduced from the phenomena of Nature, but is an *a priori* judgment of the mind itself, and therefore is universal and necessary. It is partly verified in experience, but science is unable to verify it absolutely. In all scientific experiment there is a residuum which is unaccounted for, and yet none supposes that the principle itself does not hold, but the necessary activity of the mind forces us to believe that what the laboratory cannot reveal still exists, and that were our processes more exact the infinitesimals themselves would conform to this judgment of the mind.

But such a judgment cannot be set forth as the fundamental verity. It is one among others, and it holds no primacy over the other *a priori* judgments, for from this point of view the fundamental verity is not this judgment nor that, but ourselves, our experience, our consciousness. To science, however, the causal judgment is fundamental, not as an ontological entity, but as a principle to be applied by rigid experiment to concrete facts. The principle was held long before modern science achieved its triumphs, but it added relatively little to the sum of human knowledge, and in the form taught by Plato or embodied in Karma it was an obstacle, for it substituted analogies for careful deduction.

Deduction shows an antecedent for every consequent and is contented only when all the antecedents can be detected and verified. Analogy, unable to show the antecedents or to determine them, is content with likenesses. Thus Karma, by analogy, argued that our existence now is the product of former conscious existences, but it never even attempted to prove its assertion. It was a mere assertion and worthless. As well might one argue that the explosion which follows the application of heat to gunpowder is the outcome of previous explosions.

In like manner, the attempt to prove from this

principle that there is a continuance of our conscious existence after death fails. As readily does it prove our preëxistence, as the Hindus clearly saw.

None the less, Kant, who most clearly set forth causality as an *a priori* judgment of the mind, also argued for immortality somewhat on the lines of this book. Doubtless to many it is the most convincing line of reasoning. But in our judgment something more is needed to establish so great a conclusion. As Mr. Smith points out, the belief in immortality is so widespread that it may be counted among the instincts of the race, and as such it may be trusted as readily as the principle of causality itself, and, like that principle, can find much to justify it in the phenomenal world.

The statements concerning the fundamental agreements of science and religion are in accordance with the insight of our time. Doubtless we come to this conclusion in different ways, but the signs are many that the warfare is at an end among thinking men. Science seeks truth, and religion trusts it as that which is worthy of our search. Science believes that truth is better than all dreams, and religion adores and worships that which, in the deepest sense, is. If between our formulations of religious faith and the discoveries of scientific research there are disagreements, neither shall revile the other; but both, alike

devoted to truth only, shall seek its higher form, in which our perplexities and our doubts and our contradictions shall be all resolved.

The book in its purpose, its high conception of morality and its religious faith is to be commended, and doubtless will help many persons to a higher conception of life.

NEW YORK,
May 26, 1904.

BY GEORGE BARKER STEVENS, LL. D.

Professor of Systematic Theology, Yale University.

This book might be described as the philosophical counterpart of Emerson's essay on "Compensation." Its central idea is that balance, equivalence, action and reaction, causation and consequence, are universal and invariable laws. This idea is forcibly stated and strikingly illustrated in a great variety of ways. To the present writer the author seems to have made good his main contentions — that science and philosophy point distinctly to the universality of the law of compensation and equivalence; that religion rests upon the assumption, or necessary conviction, that this law will be found to hold and apply continuously, and that it will yet assert and vindicate itself perfectly, and that the religious maxim, "Whatsoever a

man soweth, that shall he also reap," is equally a truth of science and of universal experience.

The object of the discussion is to show the congruity, at this fundamental point, of science and religion, and the work is a real contribution to that end. My principal criticism would be that Mr. Smith presents his points in too abstract a form. Take, in illustration, the title of the book, "Balance: The Fundamental Verity." Now, balance, interaction, compensation and all such words express only the idea of certain relations among realities and not the notion of entities or "fundamental verities" themselves. So, when it is said that "right" or "law" rules the world, abstractions are hypostatized and made to do duty as if they were personal powers. Law is only a method in which some Being or Power acts, and not itself a Being or Power, or "fundamental verity." It may be that Mr. Smith would admit all this, for in a few places he uses the language of theism, as when he speaks of Nature as "the book of God" (p. 133), of "God's justice" and "favor" (pp. 133, 134). But this language is rather exceptional, and the author's earlier work, "Eternalism," defined God as "the idealization of each soul's conception of Divine Order, Rightness, Justice" — that is, it seemed to stop short of the assertion of a belief in the divine Personality. With this stricture

upon the vagueness of the treatment upon the crucial point as to the real nature, personal or impersonal, of the "fundamental verity," I would accord to the book a high character for seriousness, vigor and impressiveness.

NEW HAVEN, CONN.,
May 21, 1904.

By GEORGE B. STEWART, D. D., LL. D.

President of Auburn Theological Seminary.

The subject of this inquiry is "whether the return of equivalence and compensation is not fundamental in Nature, alike in physics and in the human soul — whether the rational foundation for man's hope for a future life, and for his belief in the rightness of the world-order, should not be sought for in the supremacy of equivalence and compensation" (p. 7).

In so serious an inquiry exactness in the use of terms would seem to be a prime consideration, and the reader asks for the meaning of this "balance" which is the "fundamental verity." He is disappointed to find that at times the writer speaks of it as if it were a law of Nature, as gravitation; in other places as if it were a tendency, as the tendency of an August sun to produce a sunstroke; again, as a force, like heat or light, and in other places arouses

the suspicion that he is using it as a philosophical principle or a scientific hypothesis. The author has the true Emersonian disregard (in other ways he shows the influence of Emerson) for exactness of definition, which is scarcely in keeping with so scientific an essay.

His first conclusion is that scientific experience and the higher interpretations of Nature point distinctly to balance as the one fundamental interpretation of the universe in which man is an integral part. Concerning this conclusion a layman in science may modestly refrain from expressing an opinion, but even he may ask a question. The question is, "Will science admit this claim for this principle, law, tendency or force, called 'balance,' as the 'fundamental verity' in the natural world?" and, if not, then what value does it have in an attempt to reconcile science and religion?

A second conclusion is that the moral accountability of the soul, extended into a future life, is the fundamental verity in natural religion. To reach this conclusion he must meet certain questions that men of science would certainly ask on the one hand, and certain other questions on the other hand that men of religion must ask. Some of these questions he passes in silence, and others he can scarcely be said satisfactorily to have answered.

But, even so, the most that can be claimed for his argument is that this accountability is but one of the fundamental verities of the soul-life.

His final conclusion is built upon the two preceding. Having established balance in the physical world as a scientific principle or law or force, and in the moral and religious world as a principle or law or force, he completes his argument by showing the identity of these two laws or principles or forces. In other words, he concludes that Newton's axiom, "To every action there is an equal reaction," is the counterpart of the religious doctrine of just consequences. He sustains his contention with much ingenuity and many illustrations. But his argument at its best shows only an analogy between the physical and moral balance, and identity is not proved by analogy.

The fatal difficulty with this final conclusion, even if one is prepared to admit his previous conclusions, which are essential to it, is that it ignores the difference between Nature without life and Nature plus life, and between Nature plus life and Nature plus life plus will. One cannot shake off the feeling that if our author had reckoned with these plus signs his solution of the problem would have been modified.

The author's clearness of expression, his crisp and sententious style, his bold, fearless, frank avowal of

his convictions, his remarkable skill in marshaling his arguments, go far toward winning an audience for his original thesis, even where they will not win assent. He has made an honest and a highly interesting and most suggestive contribution to an important discussion and one that will undoubtedly carry conviction to many minds.

AUBURN, N. Y.,
May 19, 1904.

By EDWARD L. CURTIS, D. D.

Professor in Yale Divinity School.

The author of this work, already favorably known as the writer of "Eternalism: A Theory of Infinite Justice," seeks in this volume for the fundamental harmony between physical science and religion. That harmony is found in an underlying law of compensation — to every action is an equal and opposite reaction.

In the physical universe this is seen in the permanency of matter and force, whose forms may change, but the loss of every old form is compensated by the appearance of a new one. Thus the physical universe is kept in a state of equilibrium, harmony or law by the constant action and reaction of all its elements, and the underlying principle is balance,

which "presides over the processes of Nature in the small as well as the large — alike in atoms, satellites and suns — and that every transformation of matter and force, great or insignificant, includes the return of exact equivalents and compensation."

This conclusion is in accord with the general verdict of modern science, but it is here stated in a fresh, original and very luminous way. The author is gifted in the power of direct and logical expression and in the use of beautiful and appropriate similes.

In mental and moral phenomena the principle of balance is found operative since human action is attended with a series of inevitable consequences, which may be called reactions, and adjustments are constantly taking place, so that out of the varied strifes of mankind issues at last the triumph of the right. This is realized gradually in the slow progress of historic development, and yet in individual experiences it fails of perfect accomplishment. Justice, which is balance in human affairs, is incomplete in this life, and hence the necessity of a future life.

This leads our author to consider the phenomena of religion, "the oldest, the most universal, the most permanent of the institutions of men." Here are found three fundamental beliefs — "(1) that the soul is accountable for its actions; (2) that the soul survives the death of the body; (3) in a supreme power

that rights things." And balance is manifested in rewards and punishments meted out after death.

This is sound and true doctrine, and the argument is clear and forcible, and the conclusion is well drawn that religion and science are in harmony, not in conflict, and that all appearance of conflict has been due to the misunderstanding and the misinterpretation of both religion and science.

Thus with the general trend and conclusion of this work we are in hearty accord. At the same time the writer seems to fall short of the highest truth. His physical universe is causeless. His "supreme power that rights things" is apparently impersonal. Wanting is the Spirit who may bring men to a better knowledge of themselves, the Redeemer who may right the wrongs and pay the dues of others, a freedom of Love even akin to that seen among men.

The conception of a living personal God as the ultimate ground of all things cannot, it is true, be demonstrated and may involve apparent contradictions, and yet this theistic view of the universe appears to us more rational than that of our author, who holds the eternal existence of all things and beings with their inherent laws, both physical and moral.

New Haven, Conn.,
May 26, 1904.

APPENDIX

By WILLIAM N. CLARKE, D. D.

Professor of Christian Theology, Hamilton Theological Seminary, Colgate University.

1. I am no expert in science; but, so far as I understand the matter, the author is right in concluding that "the return of equivalence and compensation" is the law in Nature.

2. He is right also in concluding that "the moral accountability of the individual, extended into the future life, is fundamental in religion."

3. He is right in concluding that physical action and human action are alike ceaseless and compensatory. The axiom of the physical order is the counterpart of the axiom of the spiritual order.

Thus, so far as he goes, the author is right. I infer, however, that the law thus brought out is offered as sufficient to cover the ground of religion. If I am right in this interpretation, I must add that here I think the author is wrong. Religion seems to me to include more than the recognition of a universal equal and righteous order, or, if by some means the substance of all religion could be brought under this head, there is need of a great body of exposition of experience for which this book appears to have no room. The author has made a contribution which I

welcome as highly valuable, but feel it to be less complete and sufficient than he seems to consider it.

HAMILTON, N. Y.,
May 30, 1904.

By ALEXANDER B. RIGGS, D. D.

Professor of New Testament Exegesis and Interpretation in Lane Theological Seminary.

I do not think the author has found the harmonizing principle of science and religion. The book is interesting reading because of the lucid style of the writing and of the novel method of putting things. But the argument is sophistical because of the use of the word "balance" to mean so many different things at different times — things which are not at all alike as I conceive of them.

His conclusions are defective because he leaves no room in his scheme of thought for the presence of Jesus Christ, the greatest and most potent factor in human history, nor for a revelation of truth and the manifestation of a Redeemer. His statement of what he calls Christianity would suit very well the Unitarian and the Universalist views of Christianity, two of the smallest of the so-called Christian sects, but it is very wide of the mark as describing the views of the great mass of Christians, both Protest-

ant and Catholic, whether Roman or Greek. The attempt to sweep aside the Protestant view with a single dip of his pen (in the words on page 134, "There are many which teach that it [the law of consequences] can be evaded — that the favor of God can be gained by means other than right-doing") indicates an entire absence of appreciation of the very element in true Christianity which marks it off by a wide boundary from all the ethical theories of religion, and consequently from all the ethnic religions which have existed or which still exist. The gratuitous salvation of a repentant and trustful man, no matter what has been his past record, has transformed so many lives and renovated so many characters that it seems strange that any intelligent man should say, as the author does in the last sentence of his book, "The consequences of human action are as definite as the consequences of chemical action; that the laws of equivalence and compensation which operate in the realm of physics act with the same unfailing certainty, and with the same eternal ceaselessness, upon the soul of man." The aim of this argument is to bring the life of free moral agents under the dominion of the inexorable laws of Nature, and thus find the unifying principle between science and religion in the "eternal ceaselessness" with which Nature's physical laws operate.

This would indeed be the sad and hopeless condition of man were it not for the good news which the Gospel of redemption through Jesus Christ introduced into the world for the purpose of delivering mankind from such hopelessness under law.

As an interpretation of natural religion the author's positions and his argument may receive acceptance with a certain school of thinkers, but to any one who with wide-open eyes looks about him and sees what the Reformation and the Protestant doctrines of an open Bible and Justification by Faith in Jesus Christ have wrought in the world the book will not prove satisfactory. Science will become reconciled to religion when it takes into account and properly weighs the facts connected with religious experience to which so many millions of human beings can enthusiastically testify. The effects of the presence in the world of the revealed Redeemer and of His Gospel message after such a scientific investigation will enter into the accepted conclusions of science, and the harmony between the two will be completed by this comprehension of all religious phenomena within scientific, but not naturalistic, results.

CINCINNATI, O.,
May 12, 1904.

APPENDIX

By GOTTHARD DEUTSCH, PH. D.

Professor and Acting President of Hebrew Union College, Cincinnati, O.

Of David Friedrich Strauss it is told that a few days before his death he read once more Plato's "Phædon" in the original, and, having finished it, he laid the book aside, saying, "A brilliant piece of work, but 'ein ueberwundener Standpunkt'" (an antiquated view). The same may be said with full justice of Mr. Orlando J. Smith's new attempt at apologetics. Mr. Smith wants to do what innumerable other thinkers have done in centuries past. He wishes to prove that religion and science are compatible, and especially that the belief in a future life has not only not been contradicted by scientific investigation, but has rather been proven by it.

His chief argument is that Nature suffers no excess, constantly creating barriers to its destructive powers — that is, proves the law of compensation, which brings about the equipoise in the realm of morality, just as there is an equipoise in the material world.

The first part of the book, in which the facts of Nature proving the author's theory are expounded, is excellent. The author has a great deal of learn-

ing, wide reading, large experience, and, above all, a brilliant pen, and he does prove that "balance rules the world." The great question, however, is not "Does balance rule the world, or even mankind in general?" but "Does balance rule the life of each individual man?" True it is, for instance, that the sea, in creating dunes on the shore of Long Island, has, by its own force, created a barrier against destruction. True it is that tyranny, by its excesses, creates for itself such determined enemies that it is bound to succumb. True it is that ecclesiastic narrowness arrives in the long run at such detestable doctrines that its revolted followers will be driven to a determined and successful resistance. Thus both the moral and the physical world show the truth of the law of compensation and prove that "balance rules the world." On the other hand, the individual is not benefited by it. While Long Island is protected by the sea, other shores have been washed away, islands have been submerged, and the lives lost and the property destroyed by the tidal wave at Galveston, September 9, 1900, are not compensated by the dunes of Long Island. True it is that the ecclesiastic tyranny of Gregory VII. and Innocent III. led to the Reformation and finally to the principle of religious toleration inaugurated by Spinoza and acknowledged in all constitutions since

the Declaration of Independence. But has this fact benefited individually the hundreds of thousands burned at the stake, scourged and tortured, robbed of their property and made miserable by social and political ostracism, all on account of their religious belief?

"Life here," Mr. Smith says, "is neither long enough nor broad enough to establish complete compensation." This would prove that the author expects for every individual life a compensation in the hereafter. He would find, however, that this general view is meaningless unless we have a distinct heaven and a distinct hell, and, while one would not have to arrive at the great sensuality of Mohammed's paradise or at the lurid hell of the Jesuit Suarez, we are bound to have some distinct sentence passed on every individual soul in the way in which a jury or an individual judge would render a verdict. This theory does not become more rational by the postulate of moral compensation. This postulate no one denies, but it is merely a wish, and a wish is not a fact. Having proven in this one instance that Mr. Smith's conclusions are wrong, we have to state that even his facts are not always correct. One of his arguments is the universality of religion. Suppose this were true. It would merely prove that in the course of history religious beliefs were the necessary evolu-

tion of a certain state of mind, and it does not prove that they are indispensable. It is, however, denied by certain scientists that the universality of religion is a fact. Nor is it true that a belief in life after death is the basis of all religion, as Mr. Smith states on the authority of Grant Allen, and the best proof to the contrary is the Old Testament, and especially the books of Job and Ecclesiastes. Job xxi, 1–15, knows no answer to the question why "the wicked live, grow old — yea, wax mighty in power." Nor is Ecclesiastes iii, 21, convinced that the "spirit of man goeth upward." Judaism has not held merely for six hundred years or so, as Mr. Smith says, the doctrine of resurrection, but already in the second century B. C., as Daniel i, 22, proves, and as is confirmed by the Gospel of Matthew xxii, 34, where the Pharisees are expressly quoted as gratified with Jesus' teaching of this doctrine. We have further a clear statement in the Talmud, dating back to the first century A. D., which emphasizes the belief in resurrection as fundamental in Judaism. If such is the case with clear historical facts proven from literature, we have to be very careful with the observations made by travelers among savages, whose language is undeveloped and incompletely known and who are very reluctant in talking about their religious beliefs.

CINCINNATI, O., May 29, 1904.

APPENDIX

By THOMAS C. HALL, D. D.

Professor in Union Theological Seminary.

It is a sign of the times that men are again seeking along philosophic lines an answer to the questions of the universe. It is being gradually recognized that simple increase in the acuteness of our sensations will never give us the fundamental verity in which both heart and mind may hope to rest. Gone indeed is the high *a priorism* of the scholastic period, but the need for a generalization at once so definite that it can be tested along appropriate lines of research and yet so inclusive that the natural scientist and the philosophic thinker will both hail it as worth their tests, is felt as never before. The author of the work under review is surely right in teaching that both scientific experience and the philosophic interpretations of life point to some one fundamental interpretation. He suggests as the key to the universe what he terms "balance" — i. e. the return in equivalence and compensation in all interactions (pp. 61–70). Whether his doctrine is really an advance upon the dialectic proposition of Hegel may be doubted, but he puts strikingly and in sharp, clear English undisputed truths of relation and readjustment which must not only be constantly reconsidered, but which call insistently for a proper interpretation.

When our author extends his thesis, won on the field of phenomenal observation, to the region of the transcendental, some things must be taken into account which he has not wholly ignored, but which do not seem to us to be fully considered. The law of compensation is a law of the universe as a whole and cannot be gathered from any single part of it. Our earth, for instance, parts yearly with heat it will never, it may be, regain. Only on the field of the whole can we assert the law of equivalence. Now, the application by analogy of this law to the moral life will be to the race and not to the individual. The suicide is the sowing of the race, and the race reaps the fruit of its sowing, but no analogy from the physical laboratory can assure us that the individual must exhibit within the bounds of time the law of equivalence. This may be, indeed is, the writer's faith, but it is founded upon other and different interpretations of life's values than those of the laboratory.

This seems to be the fundamental defect of a readable and interesting attempt at a wide generalization. The basis of a religious faith must ever be one of spiritual values, and with these the laboratory and the mathematical study have nothing to do. There can be no contradiction because the fields are not the same. The writer admits that equivalence is never as absolute equilibrium obtained (chap. ii). In

fact, balance is a mental concept. Its type of reality must not be confused with other types of reality. This, we fear, the writer does. At the same time the work is a wholesome sign of an awakened interest in deepest philosophical questionings, and the lofty idealism of the author is apparent throughout.

GÖTTINGEN, GERMANY,
June 30, 1904.

By PHILIP S. MOXOM, D. D.

Pastor of South Congregational Church, Springfield, Mass.; author of "The Religion of Hope," etc.

This is a small book containing less than one hundred and fifty duodecimo pages, but its weight and worth are altogether out of proportion to its size. The author takes a simple and fundamental scientific principle and applies it to religion, with a result that must command the attention of all serious readers and will command the assent of all who are not prejudiced. His entire argument rests on the essential integrity of the universe.

"Man," as Sabatier said, "is incurably religious," but religion is inseparable from morality, and morality has its base in the constitution of things. It must follow, therefore, that the scientific and the spiritual interpretations of the world and life move toward a

common center. The principles of interaction and equivalence must be valid in every sphere and rule in theology as well as in physics. This is involved in the consistency of the divine thought and action. These principles must be valid also for a future life, as well as for this life, and their existence in this life leads irresistibly to the conclusion that there will be a future life. Thus the belief in immortality acquires a scientific basis.

This is no scheme of necessity or fatalism in the mechanical sense. Human responsibility is conserved, and the reflex of action upon character is assured. "Whatsoever a man soweth, that shall he also reap."

To the superficial reader the author's argument may seem to exclude some of the implications of Christianity, but the reader who follows the argument closely and carries it out to its last result will be convinced that nothing essential has been excluded. That the basic principles of Jesus' teaching harmonize so immediately and exactly with the author's main contention is striking evidence of the universality of that teaching, notably as expressed in the concluding verses of the Sermon on the Mount.

The apologetic literature of a generation ago is now laid aside. Its weakness was its failure to coördinate the religious with the scientific interpretation of the world. The new apologetics, of which Mr. Smith's

book is an eminent example, supplants the old, incorporating all that was fundamentally valid in it, and effects the needed reconciliation in which "mind and soul, according well, shall make one music, as before, but vaster."

SPRINGFIELD, MASS.,
June 1, 1904.

By JAMES S. STONE, D. D.

Rector of St. James's Episcopal Church, Chicago; author of "Readings in Church History," etc.

The Christian theologian will welcome this book as a clear and helpful study in the first principles of religion. It does not indeed touch upon truths which are peculiarly Christian, such as the revelation of God in Christ, and this for sufficient reason. The difficulties that trouble men to-day, and more especially men of a scientific cast of mind, are found not so much in the superstructure or evolution of, say, the Christian faith as in the foundations of all religion, in that element or quality upon which all religions, of whatsoever name, are built. Back of all forms of faith or cult, for years the conflict has gone on, and, if religion be defeated there, all faith and cult, no matter what their form, antiquity or association, come to naught. Into that field the

author of this book takes his reader, and there does him good service.

Underlying all religious beliefs is the essential truth — right rules the world. This is held and has commonly been held by all peoples whose conception of religion has in it vitality and permanence. And all peoples have further agreed that the soul is accountable for its actions, that the soul survives the death of the body, and that a Supreme Being rights all things. The author, though he uses it, does not rest upon the evidence that in all ages of which history can take cognizance these articles of faith have been held — that man has always had a religion in which these elements have been dominant — but he endeavors to show both their reasonableness and their necessity.

This he does by maintaining an analogy between things physical and things spiritual, or, in other words, by claiming that a uniformity of law obtains in both realms of life. Thus the immortality of the soul, even though the strongest argument for its truth comes from man's intuitive perception, one might almost say instinct, yet it also receives support from the same principle as the indestructibility of matter, and the religious doctrine of just consequences is one with the Newtonian axiom — to *every* action there is an *equal* reaction. In this axiom, by

the way, the author finds suggestion for the title of his book. "The fundamental conceptions of science," he says, "point distinctly and with emphasis to this higher and single generalization — *that Balance rules the world.* Balance is the key that unlocks them, the word that explains them, the principle that harmonizes them." In this sense balance and truth or right are practically synonyms.

The reader who has pictured to himself a time when sin shall have passed away and righteousness alone shall remain will perhaps demur at the application to morals of the physical principle that force is persistent and indestructible. He will demur at the prospect of the deathlessness of evil, and yet the analogy is rightly made. It is difficult, if not impossible, to conceive of goodness, truth and virtue existing without their antitheses. If a man can be good, he has also the potentiality of ill. Otherwise he has the quality of goodness as a necessity, and therefore has it without honor or credit to himself. He is no longer a moral and responsible being. So that we take the author to be well within reason when he holds that, as a man striking a wall receives in reaction therefrom a blow proportionate in force to that which he expended, so when a man does an ill action the consequences inevitably come back to him. He reaps as he has sown.

The book deserves the highest commendation. It is not only a helpful study in natural religion, a praiseworthy effort to indicate the fundamental harmony between physical science and natural religion, but it is also written most attractively, in a vigorous, honest style, with apt allusions and illustrations. The description of the sand-dunes along the ocean shore is both a fitting introduction to the author's argument and a pleasing evidence of his artistic and literary skill. These qualities make that intellectual power which is manifest in the work from beginning to end all the more attractive, and we are satisfied that the book will be remembered both for its sturdy grace of composition and for its guidance through the wilderness of misapprehensions and controversy.

CHICAGO,
May 29, 1904.

BY HOWARD AGNEW JOHNSTON, D. D.

Pastor of Madison Avenue Presbyterian Church, New York.

I have read "Balance" with much interest. Its emphasis upon the inevitable working of the law of compensation is impressive. Its indications of the truth that excess defeats itself are clear. Its argument that the universe is manifestly ruled by the

right rather than by the wrong is convincing. Its proof that the moral accountability of the individual must extend into the future life, if there be any religious reality, is clear. Its argument that the continuance of motion in all things, as an argument against death, and that the indestructibility of anything points to the continued life of man, is helpful. Its claim that both religion and science agree in the teaching that "whatsoever a man soweth, that shall he also reap," is made good. The law of consequences is simply inevitable. Justice is on the throne.

All this the book makes plain. Perhaps it is not to the point to urge that man needs something more than all this to satisfy his need and solve his problem. On the side of Nature the warnings against disobedience and the invitations to obey are manifest when one has eyes to see, but the difficulty with so many is that they have no eyes to see. There must come a teacher who will point out these truths, and especially lead the soul to realize its possibilities in the sphere of spiritual realities. The world's need of great teachers, prophets, leaders into the truth, is manifest through all the ages. The greatest of these must be that Teacher who opens to men the victories of true character, or, to use a scientific term, the greatest specialist in character is the world's greatest

hope. All the world knows that the greatest specialist in character is Jesus the Christ.

NEW YORK,
June 4, 1904.

By GEORGE C. ADAMS, D. D.

Pastor First Congregational Church, San Francisco.

I have read with deep interest the book entitled "Balance: The Fundamental Verity," by Orlando J. Smith. The conception is one that has been often spoken of, but I have never seen it worked up in this way. It is all the more interesting because of its application to that vexed question, the relation of science and religion. My own judgment is that there can be no mistake in taking the position that science points to the return of equivalence and compensation everywhere. The illustrations of this used in the book are singularly apt, and in reading it one is carried along to this one conclusion — there seems no escape from it.

We have all felt the inequality of lives that end here, and this has always been a strong argument in favor of a future life; that there must somehow be an evening up of what has appeared unjust, if it went no further. I think it is pretty generally recognized to-day among thoughtful people that moral account-

ability must extend into the future life, and that there must be compensation equivalent to the acts of the life. One of the failures in theology has been the disposition to try to do away with the accountability of the individual and sink it entirely in what did not appear to many to be a just arrangement. Forgiveness of sin is one thing, and payment of a just debt is another. More and more thinkers have been coming to the conclusion that the moral accountability of the individual persists through this life and the next.

The effort of the writer to identify the scientific and the religious conceptions of action and reaction is intensely interesting, and it certainly seems natural that the same law should hold in both departments. God is not one thing in Nature and another in revelation. He is consistent in all His acts and is always the same. Ever since Henry Drummond called our attention to the identity of natural and spiritual laws we have been prepared to see the thought carried further. Then it was "Natural Law in the Spiritual World," but this is the idea of the identity of natural and spiritual law and is a long step in advance.

It has been a fact of interest to many that Professor Huxley so strongly advocated the thought that between a true religion and a true science there can

be no conflict. It is well that this should come from the scientific side. But we are ready to go further than that and assert that a true religion and a true science must be one, that the same principles underlie both, and that they are only different manifestations of the same eternal verities. I regard Mr. Smith's book as a distinct contribution to the furtherance of this great fact and welcome it as exceedingly timely.

SAN FRANCISCO,
June 9, 1904.

BY C. ELLIS STEVENS, LL. D.

Rector of Christ Episcopalian Church, Philadelphia; Special Lecturer University of Pennsylvania.

The poet Stedman once ventured the remark that a large factor in Longfellow's success was his habit of being interesting. It must be owned that one cannot often say that sort of thing of authors of our modern scientific works. To readers already athirst for newest facts and fads driest presentation may do well enough. However that be, few who open "Balance" but will be attracted to it by the quality of fascination from start to finish.

There is ever a difficulty in drawing a line between

science and philosophy, the one seeking truth by observation and the other by reasoning. President Noah Porter of Yale, though accustomed to philosophy, used carefully to define science as the observation of uniform sequence. The definition sounded dry indeed. But for simple instance Newton's experience with the falling apple led to the observation that nothing ever falls up, but all things down, and this to the discovery of the law of gravitation and its application to the universe. Yet even gravity is only a name we apply to an effect. And when we come to ask *why* this observed force thus uniformly acts we pass into philosophy.

Such distinction as to exact science and philosophy appears essential to a really adequate estimate of Mr. Smith's striking book. The conflict in the last century between religion and science was not in the sphere of facts, but rather in the sphere of honest and earnest theories about facts. And there was gain in the destruction of some theories and theorists on both sides. With leading scientists of to-day becoming more outspokenly religious, and religious leaders more unhesitatingly scientific, such a book as "Balance" is made possible. The book belongs distinctly to this controversy and is deserving of careful attention and frank recognition on both sides.

"Balance" is a Christian book on a scientific basis.

It fearlessly, but very fairly and calmly, insists upon the scientific facts of the moral nature of man on the basis of observed uniform sequence, and it discusses in a scientific spirit the immortality of the soul and the essentials of religion. There is an absence of the merely controversial spirit. Throughout there is reverent and at the same time fresh and uncompromising original discussion of vital questions. As in all scientific works, an element of philosophy is present, the author expressing his point by saying, " Balance is a word in which are concentrated, I hold, the higher meanings of the words order, right and justice."

The full significance of this dictum may not at first be apparent, but contemplation points to profound facts of uniform observation — the fact of the equilibrium of physical forces, whether on our planet or out in the stellar universe, and the fact of just such equilibrium in the processes of human economics, whether of the individual or the nation, and in all psychic motor elements of life.

The reader will prefer to learn for himself in detail how this able writer has applied the great truth to religion and to the all-absorbing problem of humanity. But there can be no hesitation in saying that the author has gone far to discover, or at least extend, a scientific principle affecting religion and life which cannot hereafter be left out of account by the think-

ing world. He has made an exceptionally important contribution to newest and ripest scientific thought.

PHILADELPHIA,
June 17, 1904.

By SAMUEL SCHULMAN, D. D.

Rabbi of Temple Beth-El, New York City.

This is a little book that condenses much thought and makes entertaining reading on the profoundest of subjects. It is an attempt to discover the fundamental verity which shall embrace the investigations in the realms of physical science, history, ethics and religion. It is a brave attempt at a monistic philosophy. As such it appeals to our sympathies, though it arouses our misgivings. We admire the writer's wise and comprehensive grasp of the facts of science and religion and his thoroughgoing personal appropriation and harmonization of them in his philosophy of life. Nothing can be more beneficial than the author's simple and powerful presentation of the inner unity of science and religion. But we cannot subscribe to his methods. Like all systems of monism, this secures unity, at the price of confusion; the identification of physical with psychical phenomena, facts of material nature, with postulates of thought and conscience, things really distinct and not inter-

pretable, one by the other. An inner unity will be discovered by being true both to science and religion, by mental sincerity, not by artificial reconciliation.

From the building of sand-banks which defeat the ocean by its own force, a beautiful and vividly portrayed illustration of Nature's defeat of excess and its working out of *Balance*, with which the book begins, to the demand for personal immortality which marks the climax of the first thesis, the author develops the thought of equivalent compensation. There is a power that adjusts things, restrains excess, compensates deficiency, rights things. But the intrusion of the transcendent world of immortality shows that the author's truth is stronger than his theory. It is a break with *Monism* and a return to the Kantian thought of immortality postulated by our conscience. That the author feels the need of immortality shows his feeling of the disharmony existing between the inequitable distribution of happiness in this world and our demand for justice. But this feeling proves the insufficiency of his law of equivalence, the incompatibility of physical law with moral law. He is impressive in his deductions of the laws of the physical universe from the Newtonian axiom, although with reference to biological phenomena it is a question whether simplicity is not here misleading. In the laws

of mind, in the discussion of moral qualities, he is not convincing. The identification of balance with correctness and compensation is an identification of physical and moral which is really begging the question. It is a verbal analogy, not an identity.

The author further holds the essential meaning of religion, as revealed by its history, to be: (1) The soul's accountability for its actions; (2) this accountability is taken up in the belief that the soul survives after the death of the body; (3) that there is a supreme power that rights things, whether this power be conceived as personal or not. All the higher religions, of course, have these ethical implications. And, as we are justified in explaining religious significance by the best and the highest phases of its evolution, we can agree to the author's interpretation of the kernel of religion. But it is a question whether the "propitiation" of gods ought to be interpreted as an illustration of man's sense of accountability to "powers." The science of religion would rather make us say that what began as a non-ethical expression of man's dependence upon "powers" became fused with his highest ethical ideals.

"The religious doctrine of moral accountability is identical with the scientific doctrine of cause and effect." As to this we say there is harmony because they are not opposed, not because they are identical.

Religion transcends the purely physical conceptions of science and supplements them out of its own resources. After all, whatever moral suggestion there is in the word balance clings to it from its human associations. Religion is the popular embodiment of a philosophy of idealism which seeks to interpret the universe in the light of its manifestations in human thought and conscience. It cannot therefore be swallowed by a *monistic* principle taken from physics. This book is the expression of a mind so catholic, so beautiful in its simplicity and stimulating power, that the unpleasant work of criticism is overwhelmed by the admiration of the author's noble purpose.

NEW YORK,
June 24, 1904.

BY R. HEBER NEWTON, D. D.

President International Metaphysical League; author of "Church and Creed," etc.

A Long Islander, writing with the roar of the Atlantic in his ears and the curious forms of the sand-dunes before his eyes, cannot but be charmed with the opening paragraphs of this little book, picturing so vividly the story of the strife between the sea and the shore, as old ocean, ever seeking a benevolent assimilation of the island, is ever foiled in its impe-

rialism by the very force of its ambition — the more violent the storm which hurls itself against the shifting sands, the heavier being the freightage of sand carried up to reinforce the lines of defense of this hard-bestead land. A fine bit of descriptive writing this, and a perfect parable of the truth preached in this most interesting and valuable book.

The argument of the writer is that everywhere and always through Nature action is followed by reaction ; that the reaction always and everywhere tends to be perfectly proportionate to the action, Nature thus seeking an equilibrium, wherein is the secret of the beautiful order, the cosmos.

Through a vast variety of illustrations from the different fields of natural studies this truth is reiterated and reinforced until the reader feels beneath him the sure and solid ground of science.

The working of this principle is then followed into the realm of mind, through the thoughts and feelings, convictions and aspirations of the individual man, and through the social and political movements of "man writ large" in the vast and measureless sweep of history. Ideas and institutions act and react in ceaseless and resistless efforts toward equilibrium under the presence of a power making for rightness, and so for righteousness. Correspondence binds the heavens and the earth in one system.

Equivalence regulates the formation of a crystal as of a soul. Character is shaped under the law which regulates the rise and fall of empires, by the force which orders the ebb and flow of the tides. Karma is the doctrine of the tree, as of man. The constitution of the cosmos is condensed into the word *compensation*. The ultimate principle of the universe is — balance.

Man makes his character according to the law that whatsoever he soweth that shall he also reap, and character makes his destiny, else Nature fails of finding a moral equilibrium. Since this is not found here and now, it must be found elsewhere, in some after life, or the constitution of the cosmos is violated. The ancient argument for a life beyond the grave found in the inadequacy of earthly justice takes a new form and power, as it is seen to be a law of universal Nature translated from terms of physics into terms of ethics.

Moral accountability, the ethical expression of the supreme law of Nature, balance, certifies immortality, and in this duality of constrained conviction stands out in sunlight, clear and calm, the secret of the universe which men have named God, the being and the action of a power ever seeking "to right things," to bring about an order of perfectly proportioned and benignly balanced adjustment, in which

every due, becoming a duty owed by Nature, is discharged by destiny.

Religion's three "fundamentals" — the moral accountability of man, immortality, God — are the three fundamentals of science.

Religion itself, therefore, essential and universal, is one, however many and apparently conflicting religions may be.

Such, in outline, is the argument of this remarkable little volume, the author proving himself a "wise scribe" in that he "brings out of the treasury things" at once "new and old" — old as the earth itself, new as the freshest interpretation of Nature and of man, the most ancient faiths of humankind fashioned into a "form of sound words" drawn up by Science herself, the creed of universal religion.

In all which the author seems to the present reviewer utterly right — right as the order of Nature and as "the secret of the Lord" which is "with them that fear Him."

The book is a *multum in parvo*, bulking small, but weighing heavily, so little that one may read it of an evening, so condensed that it will mingle with the thoughts of many an after evening, charging them all with vital force and sweet savor.

It is written in a style which makes easy reading — broken into short chapters, composed of short

sentences, clean-cut and crisp and clear as the thought behind the translucent words.

EAST HAMPTON, N. Y.,
June 8, 1904.

By SAMUEL A. ELIOT, D. D.

President of the American Unitarian Association.

This is a compact and convincing statement of the law of compensation. Mr. Smith writes with refreshing candor. His chapters are short; his sentences ring true; his style is as crisp as his title. The logic of the argument is as irresistible as the law which the argument unfolds. We are assured that "Nature has no pendulum which swings in one direction only," and that all things are "under the control of some power or principle which curbs excess, restrains deficiency, restores balance, grants compensation." The argument proceeds on strictly scientific lines, deducing the known laws of natural phenomena and applying them remorselessly to the action and reaction which are equally observable in the realms of man's intellectual life and moral obligations. The result is to firmly establish the fundamental precepts of natural religion and to give us assurances that the moral accountability of every individual soul is not discharged in this brief mortal existence. The scien-

tific conception of physical action as ceaseless and compensatory is shown to be identical with the religious conception of human action as eternal and subject to the law of consequences. Mr. Smith does not allude to the teachings of the New Testament or to what are commonly called Christian doctrines, but his argument moves to the conclusion that the saying "Whatsoever a man soweth, that shall he also reap," is confirmed by all scientific investigation as well as by human experience.

Philosophy is supposed to be hard reading, but this book reveals a force and alertness of mind, an originality of treatment, a mastery of fact and a rapidity of narrative that should commend it to all who are interested in the problems of vital religion. One gets the impression of a scholar and writer who is no vague dreamer, but a man of affairs who is secure in his footing and certain of touch. He indulges in no questioning guesses and no wistful imaginings. The line of his thought runs strong and sure. Without being belligerent he is terse and direct. There is no dodging of issues, no incoherency of statement, no special pleading, no philosophical vocabulary. Everything reveals a free and straightforward thinker, uncompromisingly loyal to facts. His book is the application of observational science to the realm of religious inquiry.

The method and order of procedure are interesting and significant. Theological scholars have usually worked from the big end of problems to the small end. They too habitually work from the universe to the individual, from the circumference to the center, from God to man. When a man of scientific habit tackles a theological problem he is apt to approach it from the small end. Mr. Smith begins with the facts of human observation and experience and works outward and upward. But this author not only sees facts; he also sees what facts stand for and predict. He puts, as it were, a candle within the ordinary things of scientific verification and makes them glow as with celestial light. He turns sight into insight. It has often been held that, in proportion as the processes of Nature are explained and referred to established laws, everything must become tame and commonplace. There will be no room for the play of imagination, and men will look down on everything and look up to nothing. The fast increasing literature of what may be called scientific theology is rapidly driving away this delusion. We are learning that while science reveals truths, declares facts, removes prejudices, it does not banish the ideal. A true science only furnishes new material for poetry. The unknown lands about us are only multiplied. We are learning that what really fills a

thinking mind with awe is not the disorder, but the order, of the universe; not the occasional convulsions, but the fact that a few simple laws reign throughout all this apparent diversity and confusion and give unity and stability and balance to the whole.

CAMBRIDGE, MASS.,
June 23, 1904.

ANSWERS TO REVIEWERS

In reading "straight through" the preceding reviews as they come to me in type, I perceive that their first effect upon the mind of the reader may be confusing — that the introduction of many and diverse views, some being connected remotely, and others being disconnected, with the main issue, may tend to obscure that main issue, and to raise some doubt concerning the real question under consideration.

It is necessary to get our bearings here, to take a new reckoning, that we may not miss our port. The letter soliciting the reviews of this book requested that each writer should confine himself to any or all of the three fundamental propositions of the theory of balance. These fundamentals were presented in the form of questions, which I reproduce here rather than refer the reader to a preceding page:

"1. Is the author right or wrong in his conclusion that scientific experience and the higher interpretations of the system of Nature point distinctly to one fundamental interpretation — the return of equivalence and compensation in all interactions?

"2. Is he right or wrong in his conclusion that the moral accountability of the individual, extended into a future life, is fundamental in religion?

"3. Is he right or wrong in his conclusion that the scientific conception of physical action as ceaseless and compensatory is identical with the religious conception of human action as being also ceaseless and compensatory; in other words, is Newton's axiom, 'To *every* action there is an *equal* reaction,' the counterpart of the religious doctrine of just consequences — that men shall reap as they sow?"

Some of my reviewers have adhered closely to these questions; others have wandered. I take no exception to the wanderings — many of them being suggestive and instructive — save so far as they may becloud the main issue.

For the sake of clearness, I shall divide the answers to my critics into two parts — "Minor Issues" and "Fundamental Is-

sues." By "Minor Issues," I mean those that are minor in their relations to the foundations of the theory of balance, and not minor or unimportant in themselves. Under "Minor Issues" I shall consider those criticisms which, though not fundamental in their application, call for further elucidation or discussion.

I shall decline to discuss those issues, immaterial in a fundamental sense, or remotely connected with the main issue, which would carry me too far afield. Mr. Mallock, for example, raises the question of "determinism," and Mr. Mangasarian asks, "Why should one man have only one talent and his neighbor ten talents?" These are important questions. I have discussed them at length in my "Eternalism;" but they cannot, in my judgment, be considered here without prolonging, unnecessarily and unprofitably, this discussion.

For the same reason I shall decline the issues raised by Dr. G. B. Stevens, Dr.

E. L. Curtis, Dr. W. N. Clarke and others who criticise my work as incomplete in its failure to extend the inquiry concerning the significance of religion beyond the boundaries of natural or universal religion, into the region of Christianity or of Judaism. I have confined myself strictly to the agreements between the different expressions of faith. I have tried to find that ground only of which the different religious organizations may say, "It is sound so far as it goes." I have not hoped to find a ground which will include and reconcile all creeds. The creeds, being more or less in conflict, are irreconcilable. I acknowledge the great importance of the issues raised by these critics. I have no desire to evade them, but I believe that they are foreign to the present inquiry.

Under the heading of "Fundamental Issues" I shall consider those criticisms which touch distinctly the foundations of the theory of balance.

I offer my thanks — gratefully, not formally — to the reviewers who have found something in my work to commend, and also to those, not less helpful, who have searched for the weak points in my armor. In this connection I desire to acknowledge also my indebtedness to Dr. William H. Scott, of Columbus, Ohio, for a close criticism, which has been of much value to me, of the original copy of "Balance."

I. MINOR ISSUES.

1. *The Rose and the Soul.*

Mr. Mallock says:

"Science, he says, shows us that the individual life must be immortal, because science shows us that nothing which exists can be destroyed. That nothing can be destroyed is in one sense perfectly true, but in another it is equally false. If science shows us that in one sense nothing is destroyed, it shows us also that in another sense nothing endures. The material of the rose is indestructible, but the same rose never blossoms twice. Mr. Smith's argument can apply to the soul only on the assumption that the soul is a non-composite unity. His assumption may be true, but it has no foundation in science."

I hold that the theory of the indestructibility of matter and force sustains, but I do not claim that it proves, separately and alone, the immortality of the soul. The theory of universal conservation forms one link in a chain of evidence which appears to me to be conclusive. I cannot agree

with Mr. Mallock in his statement: "If science shows us that in one sense nothing is destroyed, it shows us also that in another sense nothing endures." Science shows us ceaseless transformation and no annihilation. Matter, which is senseless, appears constantly in new forms — in a leaf, a rose, an animal. There is also a thing which is not senseless; whether it be destructible or indestructible, let us call it the soul. Is it also subject to transformation? Yes; it is constantly changing, growing wiser or duller, stronger or weaker, better or worse. Under our observation it survives these changes. It may descend, and yet ascend again, and again descend. It may suffer a thousand defeats, and yet triumph over all. One soul may dominate millions of other souls; it has the power to produce roses and fruits and mechanisms and music, to harness the forces and to explore the secrets of Nature. It is a wonderful thing, this soul.

Turning to Mr. Mallock's rose. Has it the power of self recuperation? weakening, may it regain its strength? may it grow better or worse through its own powers or consent? has it any dominion over other roses, or over the forces of Nature? No; the rose, we judge, is nonconscious, senseless, with no powers of self preservation, self help, self advancement, self assertion.

There are other distinctions between the rose and the soul. The rose develops well only under favorable conditions. In good soil, well protected, with so much of heat and moisture, it ascends in a definite time to its maximum and then descends regularly and definitely to its transformation. The soul, on the other hand, often develops under unfavorable physical conditions. A great soul thrives in solitude, or in facing difficulties, dangers, pain and persecution. The soul has no definite rise to a maximum or descent to

a minimum. The soul's maximum is often reached in old age, when its body is weakest. The perfection of the rose depends upon the strength of its roots and of the stalk upon which it grows, and these upon their physical nutriment. If its roots or stalk be mutilated, the rose will be injured or destroyed. The soul's body, on the other hand, may be mutilated, its legs and arms may be amputated, without any mutilation of the soul. The strength of the soul does not depend upon the strength of the physical body with which it is, for the time, associated. Strong bodies often contain weak souls. Science has discovered no definite relation between the perfection of the physical body and the perfection of the soul, between digestion and intelligence, or between muscles and morals. No bread or meat, no system of diet or physical culture, has been found that will make a fool wise or a rascal honest. The culture of the soul is within

the soul. It thrives upon knowledge and high ideals; ignorance and vice degrade it. No force external to it can withhold the soul's food. The supply of good and evil, of things uplifting and things degrading, is inexhaustible, and subject to the demand of the soul. The soul pays in its own coinage for its own food.

The materialists hold that man is wholly physical; that the soul is a product of, and necessarily inseparable from, the physical body. If this contention be sound, there should be shown the same reactions between the body and the soul that exist between the rose-plant and the rose — it should be shown that healthy bodies are invariably essential to healthy souls; that strong bodies produce strong souls, and weak bodies weak souls; that an injury to the body produces a corresponding injury to the soul. If such reactions, complete to the minutest degree, cannot be shown between the soul and the body — if the soul

does not necessarily sicken with the body's sickness, or decay with the body's decay — why should we assume that the soul must die with the body's death?

These unvarying reactions between the body and the soul cannot be shown; they do not exist. To the contrary, experience shows that the soul is as completely independent of the body, here and now, as is possible in view of the present relations between the two. As an imprisonment, even if it be for a lifetime, does not impeach the ability of the prisoner to exist apart from his cell, or to walk forth if its walls should decay, so the present close relation between the soul and the body does not impeach the ability of the soul to exist apart from the body, or to survive the decay of the body.

The soul is confined at present in one sense to the body, and yet, in a larger sense, it is free from the body. The poorest laborer, living under forlorn condi-

tions, may rise and separate himself from his body, even as his body works on digging in a trench; he may re-live in his happier days; visit far lands and scenes; recall the dead woman whom he loved; rebuild the social system which crushes him, revel in the contemplation of that grand future in which there shall be no vile tenements begetting disease, no herding begetting vice, no poverty save as the result of one's own incapacity. Or he may, as he digs on, give to himself great wealth, surround himself with fawning flunkies, be hail fellow among princes, have all that his heart desires.

We assume that our souls are in our bodies, but they are seldom there. I am here at this desk, and in a flash I am elsewhere — back, among the friends of my youth, in the fertile valley where I was born; I revisit scenes of happiness, and again scenes of strife and fury; I gaze upon great plains and lofty mountains, and I see

again the face of Lincoln; I look into the future and I see it as I would have it; that future is mine completely; no one disputes its possession with me; I rebuild in it at my ease and leisure as I will; I hear in the silence, and I see in the dark; I peer even into the great mysteries; I see my body carried decorously to its grave; I have no horror of that grave, no fear that I shall be confined in it, no uneasiness, no doubt. So each soul roves at will, seeking its own, appropriating its own, enjoying its own. The soul is separable from the body here. Its larger and broader life here is apart from the body.

We follow the decay of the rose; we observe its absorption in other matter. And we may follow also the ashes of the physical body. But, if death ends all, where shall we find the ashes of the soul? Here was a marvelous thing that could rove at will, with potentialities almost divine. If it be not annihilated, into what has it been

transformed? The materialist denies the persistence of the soul because he cannot follow it. Can he follow its residuum? can he trace its transformation? If he cannot find its ashes, then he must assume that it is annihilated, that there is one exception to the theory of conservation, one thing that is annihilated, the one thing being that compared with which all other things are of no consequence — the soul.

2. *Swift and Slow Compensations.*

Mr. Mangasarian builds upon my admission that "justice is incomplete in this life" the assumption that consequently it must be forever incomplete; that a delay in justice involves its complete failure. If this be true, then Mr. Mangasarian must assume that the order of Nature is wholly unjust, and he must transfer his condemnations of "a Supreme Being" to Nature herself. For complete compensation is often, indeed usually, delayed here. The

youth does not reap instantly the full reward of the application given to study. The apple tree planted does not at once produce fruit. Time is as vital to compensation as to evolution. Our civilization is the product of all antecedent human thought and effort, a compensation delayed for ages.

"What guarantee have we," says Mr. Mangasarian, "that the future will not be like the past?" If he means this: What assurance have we that the constitution of Nature will not be the same in the future that it has been in the past? I answer that we have none. We may be sure that it will be the same. But, if he means to deny that anything can be that has not been, then he is refuted by every step in human progress, every new achievement in invention, art, science and thought, every advance in freedom, fraternity and enlightenment — each being the compensation of past effort.

In one view all natural processes are perfectly balanced at every instant of time; in another view the processes of balance have duration. Touching this issue, a physicist has handed to me this statement:

"A stone may fall a mile, as a result of toppling from the edge of a cliff, but there is a perfect balance, during every inch of the descent, between the controlling forces and the results thereof. Nevertheless the result of toppling from the cliff's edge is not fully achieved until the stone strikes the bottom, when there ensues a perfect equality of action and reaction. And yet the process continues, for the stone is heated; it rebounds; it strikes again; it cools; and no man knows the limit of the resulting energies."

The system of Nature may be compared to an enormous business concern which has cargoes here and trains there, incoming and outgoing; mills, quarries and mines in operation; bills payable and bills receivable falling due constantly, and settlements innumerable. And yet the books

of this concern, if correctly kept, would balance at any moment. If there should be a failure in balancing the books, the error would be in the books and not in the facts. As there is, on the other hand, no error in Nature's books, there can be no error in Nature's balance.

There are instantaneous adjustments in the system of Nature, and there are adjustments requiring time; there are, as Professor Dolbear has shown, short rhythms and long rhythms, "but never a failure of balance." There are swift compensations and slow compensations, each coming in its proper time — swift compensation for the swift action, slow compensation for the prolonged or cumulative action. For each breath there is immediate compensation in renewed life; for each moment's toil there is immediate compensation in achievement; for each good act or thought there is immediate compensation in one's own character. These swift or instantane-

ous compensations cumulate in slower and longer compensations. The accumulation of toil begets food, clothing and shelter; the accumulation of study begets knowledge and power; the accumulation of good acts and deeds begets a sturdy character. And these rhythms beget other rhythms, extended into the social body, improving human conditions, making civilization.

These rhythms go upward. Other rhythms go downward. The immediate penalty of each moment of neglect is non-achievement; of each evil thought or act is debasement. The continued neglect of toil and inquiry begets want and ignorance; the accumulation of evil thoughts and acts begets a depraved character. And these downward rhythms extend also into the social body, degrading human conditions, retarding civilization.

We shall, I believe, make no error if we assume that Nature's balance is perfect at every moment of time and in all

phenomena, and yet that compensation has duration, not because it is delayed or overdue, but because processes, from which compensations are inseparable, have duration also.

If the soul dies with the dissolution of the body, then death is a knife that severs the soul's acts from the soul's compensations, leaving antecedents without consequences — a destruction of sequence unknown elsewhere in the natural order.

3. "*The Fundamental Verity.*"

Dr. Stewart says:

"In so serious an inquiry exactness in the use of terms would seem to be a prime consideration, and the reader asks for the meaning of this 'balance' which is the 'fundamental verity.' He is disappointed to find that at times the writer speaks of it as if it were a law of Nature, as gravitation; in other places as if it were a tendency, as the tendency of an August sun to produce a sunstroke; again, as a force, like heat or light, and in other places arouses the suspicion that he is using it as a philosophical principle or a scientific hypothesis."

Balance is a fact so universal, and the phenomena in which it is present are so many and varied, that it presents many different appearances which, though they may seem to be confusing, are in no sense contradictory. Mr. Spencer, who uses the words *equilibration* and *balance* interchangeably, says (First Principles, p. 500): "Fully to comprehend the process of equilibration is not easy, since we have simultaneously to contemplate various phases of it." After considering different phases, he adds (p. 501): "All these kinds of equilibration may, however, from the highest point of view, be regarded as different modes of one kind."

"Every living body," he adds (p. 511), "exhibits, in a four-fold form, the process [of equilibration] we are tracing out — exhibits it from moment to moment in the balancing of mechanical forces; from hour to hour in the balancing of functions; from year to year in the changes

of state that compensate changes of condition; and finally in the complete arrest of vital movements at death."

Mr. Spencer adds (p. 515): "Groups of organisms display this universal tendency towards a balance very obviously." Each society "displays equilibration in the continuous adjustment of its population to its means of subsistence" (p. 520). "The various industrial actions and reactions" (p. 522), "the conflicts between conservatism and reform" (p. 526), illustrate the same "tendency." Later (p. 527) Mr. Spencer speaks of "the law of equilibration."

Again Mr. Spencer says (p. 497): "That universal coexistence of antagonist forces which, as we before saw, necessitates the universality of rhythm, and which, as we before saw, necessitates the decomposition of every force into divergent forces, at the same time necessitates the ultimate establishment of a balance."

John Fiske (Cosmic Philosophy, ii. 64)

says: "Considered in the widest sense, the processes which we have seen to coöperate in the evolution of organisms are all processes of equilibration or adjustment."

These examples of the comprehensiveness of balance do not, however, answer Dr. Stewart's request for a definition of balance as "the fundamental verity." I am well aware of the need of this definition, and I am aware also that it will be incomplete without taking into consideration the relations of balance to other fundamental conceptions, and more particularly to theistic conceptions, of the cosmic order. I have no desire to ignore these relations. Indeed, it is my design to consider them in a subsequent inquiry; but I cannot, without extending this investigation beyond what appears to me to be its natural and reasonable limits, consider them here. For the present I shall define balance tentatively, in its fundamental sense, as *that principle or order*

— manifest in action and reaction, cause and effect, antecedent and consequent; in harmony and antagonism; in attraction and repulsion; in the law of averages; in correspondence; in correlation — through which comes universal adjustment.

4. "*Out of Balance.*"

"Balance properly," says Professor McGilvary, "means a state in which the forces tending to move a body in opposite directions are equal, so that no motion results." This is a definition more narrow than that given by the lexicographers. Webster's, the Century and the Standard dictionaries authorize the use of "adjustment" — a word of broad meaning — as a definition of balance. A state in which "no motion results" — which Professor McGilvary affirms is the proper meaning of balance — has no existence. He claims that I used the word *balance*

in this sense when I said "a man out of balance falls." I see no analogy between a man falling and a state in which "no motion results." The statement, "a man out of balance falls," used negligently in my first edition and now eliminated, can be criticised on other and better grounds, since it appears to be an admission that a body can be out of balance. A body falls because it must fall to remain in balance. If a book, pushed out beyond its center of gravity on the edge of a table, should remain stationary, it would be out of balance. If it should remain suspended in such a position, then balance would be defeated. But as such a suspension is unknown in experience, balance is not defeated. Since all things are in motion, the position of each thing, in its relations to external forces, is constantly changing, and balance meets each change, in accordance with what scientific men call a moving equilibrium. The physicists will,

I have no doubt, sustain the view that the forces of balance are never defeated, are never absent, tardy or inefficient, in physical transformations.

5. *Action without Reaction.*

To my claim that, "if death ends all, then the individual reaches in extinction a point where moral effect fails to follow moral cause," Professor McGilvary answers that, while the man who, for example, dies in the commission of a crime "does not reap in his own person the consequences of his act," still there are consequences external to him, effects following his very last act preceding his extinction.

Two sets of consequences follow the acts of the individual. One set includes the reactions upon himself, upon his own character; the other set includes the reactions upon things external to himself. In the first set of reactions he reaps in-

stantly and perfectly as he sows, his character being debased in exact proportion to his evil acts, and improved or exalted in exact proportion to his good acts. In this chain of actions and reactions we may observe the perfect working of the law of moral accountability. In this chain the most secret thought, intent or desire of the individual — the hate which he hides in hypocrisy; the dishonesty or treachery which he harbors; the lust known only to himself; the sacrifice which he does not proclaim; the sense of honor and duty which he cultivates — brings its own immediate penalty or reward.

The other chain of reactions — the consequences external to the individual of the acts of the individual — are equally exact so far as they influence externals, but wholly different in the moral summing up. He may be the executor of an estate, rob the heirs, use the money successfully in speculation, restore his stealings, re-

ceive the gratitude of the heirs for probity which does not exist, and die honored and respected, leaving behind him a reputation for rectitude which has no just foundation.

It is the first chain of actions and reactions — the only real foundation for the law of moral accountability — which is snapped asunder by the annihilation of the individual in death, leaving an action without a reaction, as is well illustrated in the case of a suicide. The individual receives in his own character the perfect reaction of every act of his life up to a certain point, and then he pulls a trigger, and, lo, there is no reaction! The chain is broken. If death ends all, the law of action and reaction has its exception; Nature's forces are not compensatory; moral accountability is a fiction; eternal justice is a delusion.

Professor McGilvary uses the illustration of a falling body which, when arrested,

does not contain all of the heat generated by its motion.

"If the physicist in studying this phenomenon were to say after measuring the heat of the arrested body, 'I do not find here full compensation for the arrested motion; hence let us wait till the next world, and then we shall find the deficiency made good,' he would be proceeding as our author proceeds when, failing to find that the criminal suffers here the consequences of his sin, he tells us that 'there shall come a day of reckoning for the tyrant and the torturer.'"

The physicist does not say in this case, "Let us wait till the next world, and then we shall find the deficiency made good," but he does say, "The deficiency which we find here must be made good elsewhere. No force can be annihilated. That which seems to be lost is not lost. Though we cannot see it or find it, we know that it exists. The law of compensation demands its persistence; the balance of the forces of Nature assures us that it will not die." Religion dares to say as much, and only as much, of the soul.

6. *Every Action is Immortal.*

Mrs. Gilman says that, if there were no market for crops, there would be no effect in prices corresponding to excess or deficiency in crops. I have used the word "crops" in the sense of products marketable. If one should produce a crop for which there would be no demand, the excess would still produce a corresponding deficiency. The crop would be worthless. My critic adds:

"He quotes from various authors, citing historic instances to show that acts of cruelty and wrong produce an equal reaction in later days; that the French aristocracy caused the Revolution, and Napoleon resulted in Waterloo. Now, if the evil acts of human beings have their inevitable reactions here, is it then claimed that they have other and different reactions afterward? Do they react twice — first in their visible consequences upon other persons, then in invisible consequences to the same persons?"

On a preceding page I have discussed the internal and external consequences of

the actions of the individual. Externally the individual acts upon society, of which he forms a part. Each reaction becomes an action which produces other reactions; hence the acts of each individual must have some unceasing influence upon society and upon material things. One flips to the winds the ashes of a cigar. That action changes the relations of matter forever. Every action is, in its unending consequences, immortal. The internal consequences of the actions of the individual — the reactions upon his own nature and character — are alike persistent. They react ceaselessly, in numberless consequences of consequences.

7. "*The Ultimate Major Premiss.*"

"Deduction," says Dr. Knox, "shows an antecedent for every consequent and is contented only when all the antecedents can be detected and verified." This is correct in a general, but not in the very strict-

est, sense. Since there are antecedents of antecedents back to infinity, it would be impossible to discover all, even in the simplest case of reasoning. The same may be said, even with more force, of reasoning through consequences, since there will be consequences on to infinity, most of them as yet unknown. Reasoning would break down completely, in view of these facts, but for one important consideration — the uniformity of Nature — which, as John Stuart Mill says, "will appear as the ultimate major premiss of all inductions." Recognizing a grain of corn, I recognize that, because of the uniformity of Nature, its antecedents are the same as the antecedents of all corn, and I can trace its history in the history of all corn so far as that history is known. In the same way, I am absolutely sure concerning its potential consequences — that, planted, it may produce an ear of corn, that this ear planted may produce more corn, that the increas-

ing product may be turned into food in various forms, with consequent benefits, or into whisky, with consequent misery and perhaps crime, etc.

8. *The Galveston Disaster.*

Dr. Deutsch says:

"Thus both the moral and the physical world show the truth of the law of compensation and prove that 'balance rules the world.' On the other hand, the individual is not benefited by it. While Long Island is protected by the sea, other shores have been washed away, islands have been submerged, and the lives lost and the property destroyed by the tidal wave at Galveston, September 9, 1900, are not compensated by the dunes of Long Island. True it is that the ecclesiastic tyranny of Gregory VII. and Innocent III. led to the Reformation, and finally to the principle of religious toleration inaugurated by Spinoza and acknowledged in all constitutions since the Declaration of Independence. But has this fact benefited individually the hundreds of thousands burned at the stake, scourged and tortured, robbed of their property and made miserable by social and political ostracism, all on account of their religious belief?"

I used the conflict between the ocean and the shore of Long Island as an illustration of excess defeating itself. I do not, of course, claim that the land is always victorious in a contest with the sea. We are apt to look with partiality upon the land since it is essential to our existence, and because it seems to be less belligerent than the sea, but we must admit that excess may exist in the land as well as the sea, and that, if the land encroaches upon the sea, the sea may also encroach upon the land. The whole of Long Island was perhaps originally composed of dunes and is a conquest of the sea. We cannot assume that balance is defeated if we find a corresponding conquest of the land by the sea. Doubtless the solid ground of Long Island was contributed by "other shores" which "have been washed away." What the land gained in one place, it lost in another. The ocean robbed the New Jersey coast,

and yielded its prey to Long Island, furnishing a beautiful illustration of Mr. Markham's theory that "the thief picks his own pocket."

The destruction at Galveston is certainly "not compensated by the dunes of Long Island." If, however, my critic should visit Galveston now, he would find that city protected by a formidable sea wall. The present security is the consequence of the destructive inundation of 1900. Again, excess has set at work forces to defeat itself. Life was always insecure in Galveston before the great flood; now, because of the disaster, the people are safe from the sea.

But what of the lives lost in Galveston? of the hundreds of thousands burned at the stake during the dark ages? my critic asks. Where shall we look for their compensation? These are important questions which cannot be answered briefly. I have tried to answer them elsewhere.

I will say, however, in passing, that religion denies that these victims of the violence of Nature or of the fiendishness of man are really dead. Religion affirms that floods do not drown, that fire does not consume, the soul.

9. "*Minor*" *or* "*Fundamental.*"

The question may be raised whether all of the preceding topics are correctly classed by me as "Minor Issues."

My theme is the fundamental harmony between science and natural religion. This harmony, if it exists, can be discovered only by inquiring what is fundamental in science on the one hand, and what is fundamental in religion on the other hand, and by a final comparison of the results of these two inquiries. I have pursued this method, and have reached definite conclusions. It follows that a fundamental criticism of my position must attack one, or more than one,

of my three conclusions: (1) my conclusion concerning the foundations of science; or (2) my conclusion concerning the foundations of religion; or (3) my conclusion concerning the resulting harmony between science and religion. The criticisms which I have considered up to this point have challenged none of these three fundamental conclusions; and consequently these criticisms are classed correctly as minor in their relations to my main position.

II. FUNDAMENTAL ISSUES.

I shall now consider the criticisms touching directly the three fundamental questions.

The First Question.

"1. Is the author right or wrong in his conclusion that scientific experience and the higher interpretations of the system of Nature point distinctly to one fundamental interpretation — the return of equivalence and compensation in all interactions?"

Of this issue Professor Hibben says that I have overlooked

"the dissipation of available energy and the newly discovered radio-activity, which seems to be accompanied by no equivalent consumption."

If it should be true that there is a dissipation of available energy which is reducing the total energy of the universe, and if it be true also that the newly discovered radio-activity is really accompa-

nied by no equivalent consumption, then these discoveries would overthrow Newton's axiom concerning the reciprocity of action and reaction, and also the law of the conservation of energy, and other fundamental concepts now accepted by science as essential to the comprehension of the processes of Nature. I must deny, however, that any instance of an actual loss of energy, or of a failure of the law of action and reaction, is known to science.

Dr. Knox says that the theory of balance — "set forth in varying forms: 'To every action there is an equal and opposite reaction;' 'Effects follow causes in unbroken succession;' 'Matter is indestructible;' 'Force is persistent and indestructible,' etc." — "belongs to a region incapable of proof." Dr. Knox questions the demonstrability of the fundamental conceptions of science. He does not question their truth or value; indeed, he characterizes

these judgments as "universal and necessary" and to science fundamental. The fundamental judgments of science are not speculations; they are the substantial results of scientific experience. They are, I believe, in the highest degree demonstrable, being the inevitable and well tried deductions from all, or nearly all, scientific experimentation and observation.

The Second Question.

"2. Is the author right or wrong in his conclusion that the moral accountability of the individual, extended into a future life, is fundamental in religion?"

Dr. Deutsch says:

"Nor is it true that a belief in life after death is the basis of all religion, as Mr. Smith states on the authority of Grant Allen, and the best proof to the contrary is the Old Testament, and especially the books of Job and Ecclesiastes."

I have not asserted that a belief in a future life is "*the* basis of all religion," but I do claim that the recognition of a future

life is one of the foundations of religion. I have discussed (p. 113) the materialism of the ancient Hebrews, and shown that Judaism in time repudiated its early materialism and accepted the doctrine of the immortality of the soul. Dr. Deutsch sets this conversion back fourteen hundred years before the time of Maimonides, to which I referred. If he is right in this, he has strengthened my case by showing that the Hebrews revolted against the doctrine of annihilation at a much earlier time than that indicated in my statement. I might take issue with Dr. Deutsch concerning the time of the complete and formal repudiation of materialism by the Hebrew church, but the question is immaterial here. The fact of the conversion is important; its date is unimportant.

I have endeavored to show by the history of religion, and by an analysis of the essence and substance of religion, that materialism is an irreligious doctrine. I

have admitted that it has been taught, in rare and exceptional cases, as a religious doctrine, even as other irreligious theories have been advanced in the name of religion. In one or two of the many organizations classed as religious, of which we have accurate knowledge, materialism was accepted for a time; in none has it survived.

Dr. Deutsch contends, apparently, that materialism cannot be designated as irreligious, since it was accepted by the early Hebrews. But it is rejected by the later Hebrews, who have adopted the opposite doctrine, that the soul survives death. If the soul survives death, then the theory of materialism is erroneous. The creed of modern Judaism, in accepting the survival of the soul, declares that the materialism of the early Hebrews is erroneous. That which is erroneous cannot be religious.

Dr. Riggs challenges and resents my definition of religion. He says:

"The gratuitous salvation of a repentant and trustful man, no matter what has been his past record, has transformed so many lives and renovated so many characters that it seems strange that any intelligent man should say, as the author does in the last sentence of his book, 'The consequences of human action are as definite as the consequences of chemical action; that the laws of equivalence and compensation which operate in the realm of physics act with the same unfailing certainty, and with the same eternal ceaselessness, upon the soul of man.'"

Commenting upon this quotation from me, Dr. Riggs says:

"This would indeed be the sad and hopeless condition of man were it not for the good news which the Gospel of redemption through Jesus Christ introduced into the world for the purpose of delivering mankind from such hopelessness under law."

Dr. Riggs expresses his views with commendable clearness and candor. His understanding of the meaning of religion — expressed in the doctrine of "gratuitous salvation," and in his theory that the "condition of man" would be "sad and

hopeless" if the individual were compelled to reap as he sows — is so completely antipodal to my position that controversy on this issue would be profitless here. Having presented Dr. Riggs's dissent, I decline combat.

The Third Question.

"3. Is the author right or wrong in his conclusion that the scientific conception of physical action as ceaseless and compensatory is identical with the religious conception of human action as being also ceaseless and compensatory; in other words, is Newton's axiom, 'To *every* action there is an *equal* reaction,' the counterpart of the religious doctrine of just consequences — that men shall reap as they sow?"

Dr. Schulman protests against

"the identification of physical with psychical phenomena, facts of material nature, with postulates of thought and conscience, things really distinct and not interpretable, one by the other."

He refers later to "the incompatibility of physical law with moral law."

Professor Hibben also says:

"What is proved is this — that in the physical and the psychical we have two sets of radically disparate phenomena."

Dr. Riggs says that the harmony between religion and science will be completed by a "comprehension of all religious phenomena within scientific, but not naturalistic, results."

The language in these quotations is the language of supernaturalism. I shall not antagonize the theory of supernaturalism here, save by saying that which cannot well be left unsaid — that science knows nothing of the "incompatibility of physical law with moral law," or of "two sets of radically disparate phenomena," or of any phenomena which may be "scientific, but not naturalistic."

Assuming the truth of all that is fundamental in the theory of supernaturalism — that the universe is ruled by a supreme Supernatural Being, omnipotent,

omniscient and omnipresent — we must assume also that the processes and laws of Nature are his processes and laws. If we find incompatibility of physical law with moral law, the incompatibility is his; if we find conflicting phenomena, the conflict is his. If we find order in Nature, it is his order; if we find disorder, it is his disorder; if we find universal and exact compensation in all natural processes, we know that Nature vindicates him; if we find that natural processes are not compensatory, that they are inexact or defective, we know that Nature condemns him.

Why do these critics insist that God has two ways, incompatible or disparate, of governing the universe? Are both ways just? Then they are not incompatible or disparate. If both ways are just, then they are one, not two. Is one way just, and the other unjust? Then God is both just and unjust.

If my critics are convinced that any of Nature's processes are not compensatory, if they have sought in vain for complete rectitude in natural law, then they do well to stand by the truth as they see it; but they cannot avoid these consequences of their position: If Nature's processes are not compensatory, then God's processes are not compensatory; if my critics have sought in vain for complete rectitude in natural law, then they have sought in vain for complete rectitude in God. They cannot separate God from Nature.

Dr. Stewart says:

"Having established balance in the physical world as a scientific principle or law or force, and in the moral and religious world as a principle or law or force, he completes his argument by showing the identity of these two laws or principles or forces. In other words, he concludes that Newton's axiom, 'To every action there is an equal reaction,' is the counterpart of the religious doctrine of just consequences. He sustains his contention with much ingenuity and many illustrations. But his argument at

its best shows only an analogy between the physical and moral balance, and identity is not proved by analogy."

The scientific conception of *physical* action is this: *It is ceaseless and compensatory.*

The religious conception of *human* action is this: *It is ceaseless and compensatory.*

If Dr. Stewart had set these two conceptions in close comparison with each other, as in the two preceding paragraphs, he would have concluded, I am sure, that they are identical, not analogous. Both are interpretations of one law — the law of exact consequences, of ceaseless compensation.

The two conceptions are not identical by accident. The uniformity of Nature demands that they shall be identical.

We have no difficulty in thinking of physical consequences as exact. All experience shows that they are exact. Ex-

tending this one law of exact consequences into the realm of the soul, we perceive that the one law establishes the religious theory of moral accountability, and the rightness of the cosmic order. We cannot doubt that this one law is that which religious thought has sought to comprehend in all stages of civilization, and with increasing success as men have grown in knowledge and grasped higher ideals. The very same law which is recognized by science as fundamental in the physical world, establishes perfect justice, infinite and eternal, when extended into the world of souls. Applied to matter and force, this one law explains the marvelous order in the material universe; applied to the individual, it becomes the noblest philosophy that the human mind can grasp. For it explains the dark problem of evil, and it vindicates the justice of God.

Shall we say that this one law operates only in the physical world? Then we deny

the uniformity of Nature. Shall we say that we must not claim compensation for the soul because we cannot follow the soul and trace out its complete compensations? That is not the method of science. Newton did not affirm that gravitation existed only so far as he could see or observe it. He affirmed that gravitation was universal. Modern science affirms also that gravitation and all other laws and ways of Nature are universal. The science of astronomy has advanced only through the postulation that the very same laws of gravitation and of cause and effect operate in the remotest parts of the universe as they operate here — that these laws are there because they are here. Scientific minds are bold and courageous in affirming the uniformity of Nature. Religious minds may find inspiration and good example in this lofty courage, in this sublime faith, of science. Religious men may take their stand also, firmly and impregnably, upon the uniform-

ity of Nature. As scientific men affirm that the law is the same here, there and everywhere, and that distance or time or transformation cannot change the law, so religious men may affirm that the law of compensation is there beyond the grave because it is here, that distance or time or death cannot change the law.

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